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THE MORE IMPORTANT RECORDS FOR JUNE

The development of grasshoppers has been uneven, and all stages are present, from the egg to the adult. Adults are mating in the southern part of the infested territory. Despite the effect of cool, rainy weather, which killed many young nymphs, the number surviving and individuals that hatched later make up great populations over the entire infested territory. The rains may prove beneficial by producing succulent wild vegetation, affording food for the hoppers and preventing them from severely injuring cultivated crops.

The Mormon cricket is occurring in great abundance and is extending its depredations farther eastward than before, injuring crops in Nebraska; however, inclement weather has delayed development of the pest and the actual damage to crops, especially in the Rocky Mountain region, has been less extensive than in 1937.

Owing to the prolonged cool, rainy weather, cutworm damage continued later in the season than usual.

The armyworm outbreak in the Mississippi and Ohio Valleys has largely subsided; however, moths are abundant farther north, around the Great Lakes. A disease evidently played an important part in the control.

Although weather conditions have been unfavorable to chinch bug development, isolated areas of infestation, from moderate to severe, are found throughout the chinch bug belt.

The hessian fly has multiplied greatly and, although damage to the wheat crop is moderate, the population in many localities may be sufficient to menace the crop to be planted this fall.

The corn ear worm is occurring in usual abundance in sweet corn and tomato over most of the South. Farther north, in Illinois and New York, infestation is occurring a little early.

The stalk borer was reported as more abundant than usual in a strip from New York westward to Nebraska.

The codling moth development early in the spring portended a heavy early infestation, but cool weather late in May and early in June in most localities in the East and Middle West checked activities, and the infestation in those areas is about normal.

The oriental fruit moth is more abundant than usual from New Jersey southward to Georgia and in Kentucky and Tennessee. It was also reported from a locality in Louisiana, where it had not been recorded previously.

The walnut caterpillar is occurring on pecan in Mississippi, Missouri, Oklahoma, and Texas, where it was so destructive last year.

The Mexican bean beetle is destructively abundant over the infested territory east of the Mississippi River. It was reported for the first time from Arkansas and Louisiana.

The pea aphid outbreak has largely subsided.

Boll weevils are reported generally from the Atlantic coast to Texas and Oklahoma, including large areas in those States. Most of the reports indicate that the weevils were more numerous in June 1938 than in June 1937 or 1936.

THE MORE IMPORTANT ENTOMOLOGICAL FEATURES IN CANADA FOR MAY-JUNE

At the end of May cool weather in Manitoba and abundant rainfall in southern Alberta had delayed the hatching of grasshoppers; however, by the end of the third week in June they were numerous locally in southwestern Manitoba, and abundant and active over a large part of the prairie region of Alberta. In Saskatchewan hatching was becoming general by the end of May. Latest reports (June 21) indicated that considerable damage was developing in northwestern and some north-central areas. There was also some damage in the southeast. The spreading of poisoned bait in organized control campaigns was well under way in many districts.

Severe infestations of the pale western cutworm were reported developing in various localities in Saskatchewan and serious crop losses had occurred from Battleford to Mervin and Paynton, Eastend to Dollard, and in Carlton, Cantuar, Ponteix, and Rush Lake districts. Cutworm damage

in southern Alberta was curtailed by abundant rainfall in May, but some losses occurred from Milk River to Wainwright. Losses were most severe in the extreme north and south.

Unusually heavy damage to the wheat crop by wireworms was reported in Saskatchewan, where infestations are much higher than a few years ago, especially in areas affected by prolonged drought. Damage also occurred in southern Alberta, where losses up to 15 percent were reported in a number of localities. Conservative estimates from a subsequent check-up indicated a total loss of from 5 to 10 percent of the wheat acreage, with the worst affected areas reseeded. These insects are more prevalent in southwestern Ontario than for several years and are damaging crops such as tobacco and tomato.

Major flights of June beetles are occurring over a large part of Ontario and in Quebec from Papineau County westward. The last major flight occurred over the same territory in 1935.

The species Sitona lineatus L., which was first discovered in North America in the vicinity of Victoria and on the Saanich Peninsula, British Columbia, in 1937, has spread over the entire peninsula. It attacks legumes, principally peas and beans, and many complaints have been received regarding it. The species Brachyrhinus singularis L., which was also reported for the first time last year, at Victoria, British Columbia, is a general feeder, and is giving much trouble in gardens.

Heavy infestations of the forest tent caterpillar developed in the Ottawa and St. Lawrence River Valleys. The eastern tent caterpillar was also numerous in many localities.

Much foliage injury to boxelders by the fall canker worm was reported in parts of southern Manitoba and in Saskatchewan.

Outbreaks of tick paralysis among sheep and cattle, caused by the paralysis tick, Dermacentor andersoni Stiles, occurred in several localities in the interior of British Columbia. Cases in humans were reported at Lytton and Rossland, British Columbia. The last case affected a young girl and terminated fatally. A preliminary report on a dead rabbit infested with the rabbit tick, Haemaphysalis leporis palustris Pack., picked up near Vavenby, British Columbia, indicated tularemia.

GENERAL FEEDERS

GRASSHOPPERS (Acrididae)

Indiana. C. Benton (June 20): Numerous small grasshoppers were observed in spots along roadsides near La Fayette on June 13-17.

Illinois. W. P. Flint (June 23): The heavy rains late in May and the first half of June have greatly reduced grasshopper injury. Hoppers have been hatching quite generally in the southern half of the State and hatch is nearly complete for the southern two-thirds. Melanoplus bivittatus (Say) is more abundant than at any time for the past several seasons. Adults of this species are maturing and mating.

Minnesota. A. G. Ruggles (June): Spotted hatching and damage occurring. Only 10 percent of the eggs hatched in some places, in others 50-70 percent.

Iowa. C. J. Drake (June 25): Baiting is being carried on in the two southern tiers of counties and in the western part of Iowa. Heavy rains have destroyed large numbers of newly hatched hoppers but in some of the most heavily infested areas it is not uncommon to find newly hatched hoppers running from 200 to 300 per square yard in seeded alfalfa and clover fields. Hatching is not yet complete.

Missouri. L. Haseman (June 24): The abundance of nymphs in carefully checked areas throughout the State, where excessive rainfall occurred, has shown very definite reduction. Rain has also retarded hatching and has provided abundance of wild vegetation which may carry the pest throughout the rest of the summer. The two-lined grasshopper (M. bivittatus), the confused grasshopper (M. confusus Scudd.), and the lesser migratory grasshopper (M. mexicanus Sauss.) are now appearing as adults in considerable numbers and are mating. The last of these are showing practically mature eggs.

North Dakota. J. A. Munro (June 21): Adults are appearing in the southern part of the State, M. mexicanus being the predominating species. Hatching in the north is not yet complete.

South Dakota. H. C. Severin (June): Idle lands are furnishing untold millions of hoppers, of which M. mexicanus and M. bivittatus are the most important species.

Nebraska. M. H. Swenk (June 22): The eggs of Melanoplus spp. have now, after 6 weeks of slow but continuous hatching, largely hatched. Hatching proceeded more rapidly in western than in eastern Nebraska, the opposite of the usual condition, owing to the prolonged cool, rainy weather that has

prevailed over eastern and southeastern Nebraska. M. mexicanus has largely completed its development. M. bivittatus and M. differentialis (Thos.) are now mostly half-grown nymphs, just beginning to move freely from the hatching grounds and concentrate on the edges of the cultivated fields. Heavy populations are present in all parts of the State. Grasshoppers are being parasitized by Sarcophaga kellyi Ald. and other parasitic flies during the last week or ten days.

Kansas. J. R. Horton (June 21): Hoppers were extremely numerous in the early stages in the vicinity of Wichita, and have severely damaged tender, young growth of various crops. Their numbers have decreased steadily and very considerably since April 1 but they are still numerous and beginning to do serious damage in isolated locations. Many are now in the winged stage. They have not attacked young field corn in one spot where they are numerous. They do not respond well to control measures in the presence of tender young plant food.

H. R. Bryson (June 25): Rather doubtful whether grasshoppers are more abundant than last year. They have not migrated into the rowed crops but are still in the weeds, turn rows, and roadsides. Heavy infestations are spotted.

Oklahoma. C. F. Stiles (June 22): So far the damage has been light, due to excessive rains over the entire State. Rainfall is much above normal and vegetation is ranker than it has been for a number of years. The hopper population, however, has not been very much affected by the weather. We have them by the billions scattered over the entire State, with the exception of a few mountainous counties in the southeast. The principal species are M. bivittatus, M. packardii Scudd., M. mexicanus, and M. differentialis. Dissosteira longipennis Thos. is present in small numbers in all of our western counties, and poisoning is under way for migrating bands into these counties.

Texas. F. L. Thomas (June 24): Grasshoppers constitute a threat to all crops in parts of at least 117 counties. The most serious outbreaks have occurred in northwestern Texas. Very good control is being obtained.

Utah. G. F. Knowlton (June): Grasshoppers were reported as very abundant and attacking alfalfa, sugar beets, and other crops in the north-central and central parts of the State, from June 10 through June 23, and on June 24, serious injury was reported from the Uintah Basin.

Oregon. D. C. Mote (June): Hatching throughout the month in eastern Oregon. First instar to adult stages are present.

Wisconsin. E. L. Chambers (June 28): M. femur-rubrum, the species responsible for the greatest injury last year, is just beginning to hatch all over the State. M. mexicanus began to hatch before the middle of April, and was checked very little by the weather. Control was started on the sandy soil of northwestern Wisconsin before May 20.

MORMON CRICKET (Anabrus simplex Hald.)

- North Dakota. J. A. Munro (June 21): Heavy infestations have been observed in Adams County, in the southwestern area, and Burleigh and Emmons Counties, in the south-central part of the State. The infestations are more or less localized but rapidly spreading over large areas. No serious crop loss reported.
- South Dakota. H. C. Severin (June): Mormon crickets have increased in abundance greatly, but have done little damage to field and garden crops.
- Nebraska and Wyoming. M. H. Swenk (June 22): On June 14 a severe outbreak was reported in western Scotts Bluff County, Nebr. This is the first instance of severe damage within the boundaries of Nebraska of which we have record, although the species has long been known to occur in small numbers in the western and central parts of the State. Severe infestations are in progress in Wyoming, a short distance west of the State line.
- Utah. C. J. Sorenson (June 20): Increased numbers of bands are migrating from range lands, foothills, and mountains in central Utah to menace crops on isolated ranches. Crop damage being prevented. Infestation in Millard County largely eradicated except in mountainous areas. Two small bands have migrated from Juab County into the southern end of Cedar Valley, Utah County; all on range land, several miles distant from crop lands.

CUTWORMS (Noctuidae)

- Mississippi. C. Lyle (June 24): Specimens of Feltia annexa Treit. and F. gladiaria Morr. were sent in from Philadelphia, Neshoba County, in the east-central part of the State, with a report that they had caused moderate damage to cotton following cover crops. Specimens of Prodenia ornithogalli Guen. were sent in from Liberty, Amite County, in the southwestern part of the State on June 20, with a report that they were causing moderate damage to cotton squares.
- Michigan. R. Hutson (June 22): Adults of Lampra alternata Grote and Agrotis unicolor Walk. are emerging in numbers at Watervliet, South Haven, Grand Rapids, Fennville, and Shelby, in southwestern Michigan.
- Minnesota. A. G. Ruggles and assistants (June): On June 9 at Knutson, Ramsey County, in the southeastern part of the State, A. c-nigrum (L.) moths were coming to baits in great numbers, along with other species.
- Nebraska. M. H. Swenk (June 22): Flights of moths of the western army cutworm, Chorizagrotis auxiliaris Grote, which began to be heavy about the middle of May in all parts of the State, have continued to cause many complaints from May 21 to June 20. The variegated cutworm (Lycephotia margaritosa saucia Hbn.), which species began flying on April 19 in the vicinity of Lincoln, in the southeastern part of the State, reached its height of activity shortly after the middle of May, and then dwindled to a mere sprinkling about June 5.

D. B. Whelan (June 22): Cutworms have been somewhat more than normally abundant and injurious from May 21 through June 20 in gardens and cornfields especially. The period of their greatest destructiveness was from May 23 to June 7. Moths of the black cutworm, or greasy cutworm, A. ypsilon Rott., have been flying since April 23, most abundantly during the last week in April and the first week in May, around mid-May, and again during the second week in June. Moths of the spotted cutworm, A. c-nigrum, were flying abundantly from May 17 to June 13, reaching a maximum on June 3. Moths of the cotton cutworm, Prodenia ornithogalli, were flying from May 4 on, and in greatest numbers from June 7 to 15. The bristly cutworm, Polia renigera Steph., was present in fairly heavy flights from May 25 on, especially from May 31 to June 10. Moths of the dark-sided cutworm, Euxoa messoria Harr., were not noted until June 10, and are still flying in moderate abundance. The dusky cutworm, F. venerabilis Walk., was reported destroying completely a growth of burningbush (Kochia scoparia) in Boone County on May 27.

Wyoming. M. D. Carson (June): Approximately 100 acres of sugar beets, corn, and alfalfa had been injured in Platte County, in southeastern Wyoming, by May 27, by Chorizagrotis auxiliaris. A few complaints have come in since then. (Det. by Margaret Greenwald.)

Utah. G. F. Knowlton (June 8): Adults of A. c-nigrum, are coming to trap lights at Logan in Cache County.

(June 14): Numerous adults of the striped beet caterpillar, Scotogramma trifolii Rott., have been coming to the trap light at Spanish Fork, Utah County.

(June 20): Relatively few Porosagrotis orthogonia Morr. as compared with the number in 1937. They are now entering the prepupal stage.

BEET WEBWORM (Loxostege sticticalis L.)

South Dakota. H. C. Severin (June): Sugar beet webworms have made their appearance in many areas and have done some damage.

Nebraska. M. H. Swenk (June 22): A serious outbreak of this pest, evidently originating from infestations on chenopodiaceous weeds, was reported on June 20 from Box Butte County, in western Nebraska, where control measures were resorted to.

Wyoming. Margaret Greenwald (June 15): Adults have been flying since early in May in Park County, in northwestern Wyoming, but have been noticed to be unusually numerous the last two weeks.

Utah. H. E. Dorst (June 23): Very few of these moths have been observed in beet fields in northern Utah. No injury is anticipated as beets are too large.

FALL ARMYWORM (Laphygma frugiperda S. & A.)

Mississippi. C. Lyle (June 24): Larvae, almost full-grown, were received from Avera, in Greene County, in southeastern Mississippi, with a report that they were abundant in buds of corn.

WIREWORMS (Elateridae)

Kentucky. M. L. Didlake (June 1): Wireworms are causing injury to newly set tobacco plants more severely than usual at Lexington.

North Dakota. J. A. Munro (June 21): Serious injury to wheat and corn reported from Bottineau, Rolette, Divide, Emmons, and Eddy Counties and the northwestern part of Cass County. The prairie grain wireworm, Ludius aeripennis Kby., is the predominating species.

Nebraska. M. H. Swenk (June 22): Wireworms (Melanotus sp.) were reported from Cuming County on June 8, as completely destroying seed corn on bottom lands.

Wyoming. Margaret Greenwald (June 10): Wireworm damage in Park County restricted to relatively small areas in some bean fields where seed is usually completely destroyed.

WHITE GRUBS (Phyllophaga spp.)

South Carolina. O. L. Cartwright (June 10): P. prununculina Burm. was found in considerable numbers feeding on pine at Blackville on June 8. The following beetles were taken in numbers in the Blackville trap-light: P. gracilis Burm., May 8 to June 21, and P. uniformis Blanch., on June 10 to June 21.

Louisiana. B. A. Osterberger (June 15): Since about June 15, many undetermined June bugs have been in flight at Baton Rouge from dusk to almost midnight.

Indiana. P. Luginbill and H. R. Painter (June 20): Severe damage is being done to bluegrass in a 60-acre pasture tract near La Fayette.

Michigan. R. Hutson (June 22): P. crenulata Froel. and P. rugosa Melsh. were reported from Frankfort, northern lower peninsula, on June 15, as feeding on oak, gooseberry, rose, elm, dogwood, and grapes, as well as shrubs.

Minnesota. A. G. Ruggles (June): J. Medler reported on June 9 that a heavy flight of adults was seen at light traps in Ramsey County.

Iowa. H. E. Jaques (June 23): May beetles are rather late in appearing but are very abundant generally.

Nebraska. M. H. Swenk (June 22): From Dixon and Butler Counties, in eastern Nebraska, on June 17, there came reports of white grubs destroying the roots of strawberry plants that had been set out this year.

Kansas. H. R. Bryson (June 6): White grubs were reported to be injurious to strawberries at Wellsville and to pasture and meadow grass near Junction City. (June 22): Adults of P. lanceolata Say have been unusually abundant on the high prairie land the entire month of June in the vicinity of Manhattan. Many of the beetles are parasitized.

Oklahoma. F. A. Fenton (June 23): P. lanceolata reported present at Newkirk, Jet, and Blackwell, in the north-central part of the State. R. G. Dahms (June 23): Adults of P. lanceolata have been reported doing serious damage to young cotton plants in a few cases in southwestern Oklahoma.

Texas. O. G. Babcock and E. R. Lawrence (June 17): White grubs were reported as causing serious injury to pastures in some locations in Crockett County, north-central Texas. The grass was killed in spots ranging from 10 to 75 feet across. At a depth of 7 to 8 inches grubs were found at the rate of 4 to 8 per square foot. Mature beetles were identified as P. glabricula Lec. by H. J. Reinhard. White grubs were also reported as seriously injuring pasture land in Bosque County.

Utah. G. F. Knowlton (June 20): White grubs destroyed the marketability of 70 acres of potatoes in 1937 near Panguitch, south-central Utah. Grubs of various sizes are abundant in soil now planted to potatoes, alfalfa, and garden truck, in this area. The beetles were abundant during the past ten days.

JAPANESE BEETLE (Popillia japonica Newm.)

Connecticut. J. P. Johnson (June 20): The earliest emergence record for this State for the adult occurred this year at Bridgeport, on June 20. Results of soil surveys for grub development indicate an early emergence in considerable numbers.

New York. T. N. Dobbins (June 21): Larval development was retarded by the unusually cloudy and cool weather which characterized May and the greater part of June. In the New York City metropolitan area beetles were picked up on June 21, with indications that general emergence will be several days later than normal.

New Jersey. T. N. Dobbins (June 21): Beetles were picked up in the field, in southern New Jersey, on June 14.

T. L. Guyton (June 19): Noted first adults at Bound Brook, in northern New Jersey today.

Delaware. L. A. Stearns (June 25): First adult observed at Newark on June 2; adults beginning to appear in considerable numbers throughout New Castle County by June 21; noted in abundance on heads of mature wheat near Smyrna, in Kent County, on June 22.

Maryland. E. N. Cory (June 22): First adult on lower Eastern Shore on June 5 and at Princess Anne on June 7. Since then reports have come in from Baltimore and Prince Georges Counties.

ROSE CHAFER (Macrodactylus subspinosus F.)

Massachusetts. A. L. Bourne (June 24): The rose chafer made its appearance about June 8, but has not been so abundant as usual.

Connecticut. W. E. Britton (June 22): Very prevalent in some localities, less so than last year in others. In Milford the beetles were causing damage in peach and apple orchards. Reports of heavy feeding on elm foliage in Branford, North Haven, and Wallingford have been received.

New York. N. Y. State Coll. Agr. News Letter (June): Rose chafers are appearing in orchards and on truck crops.

Maryland. E. N. Cory (June 3): Reported as appearing generally on roses in the State.

Michigan. R. Hutson (June 22): Infestations have been brought to our attention from Shelby, Grand Rapids, Detroit, and Charlotte, all in southern Michigan.

A WEEVIL (Calomycterus setarius Roelofs)

Connecticut. M. P. Zappe (June 23): Leguminous plants at Stratford, in the southwestern part of the State, are being attacked. Adults are beginning to emerge.

Maryland. E. N. Cory (June 18). First seen on June 15 at Towson, in Baltimore County.

A PLANT BUG (Thyanta custator F.)

California. C. K. Fisher (June 14): These bugs are very numerous about one home garden and lawn in the city of Fresno, and on loganberries and blackberries. They have been observed on weeping willow, mulberry, flowers, shrubs, pine, and grass. They have increased in numbers very rapidly during the last two weeks.

COMMON RED SPIDER (Tetranychus telarius L.)

Ohio. N. F. Howard (June 18): Seriously injuring boxwood at Columbus.

Nebraska. M. H. Swenk (June 22): Severely injuring evergreens.

CEREAL AND FORAGE - CROP INSECTS

WHEAT AND OTHER SMALL GRAINS

ARMYWORM (Cirphis unipuncta Haw.)

- New York. N. Y. State Coll. Agr. News Letter (June): Moths have been observed at lights on Long Island and occasional larval injury to young corn plants was noted. Traces of injury to corn in the lower Hudson River Valley were seen. In western New York great numbers of moths are being caught in light traps.
- Ohio. J. S. Houser (June 2-6): Adults were attracted in great abundance to the honeydew excreted by aphids on white-birch foliage at Wooster, Wayne County.
- T. H. Parks (June 22): While moths were caught in bait pans late in May and early in June, the only outbreak was in a field of barley in Butler County, southwestern Ohio, reported June 3.
- Indiana. J. J. Davis (June 13): Armyworm has been conspicuously abundant throughout the State in isolated areas, more especially in central and southern Indiana. Because of the lateness of corn planting, most of the injury has been to timothy and especially new pasture plantings and to small grain.
- L. F. Steiner (June 2): At Bicknell armyworm moths have appeared in traps in such numbers during the last few days that accurate records on codling moth are impossible. At Vincennes larvae have been attacked by disease, and mortality has reached nearly 100 percent.
- Illinois. W. P. Flint (June 23): The outbreak of May and early June is over. Bacterial disease was the most important factor in reducing injury. In many instances larvae were killed almost overnight by this disease.
- Michigan. R. Hutson (June 22): Moths were very numerous in light traps in East Lansing, southern Michigan, on the night of June 21.
- Kentucky. M. L. Didlake (June 20): Spring armyworm adults were seen at light at Lexington last night.
- North Dakota. J. A. Munro (June 23): Numerous adults are being taken at lights at Fargo and Jamestown, both in the southeastern part of the State.

Nebraska. M. H. Swenk (June 22): Moths began flying on April 23 in eastern and southeastern Nebraska and continued until May 10, reaching peaks on April 26 and May 2 to 4. Another period of heavy flights occurred from May 17 to 20, and a third from May 29 to June 19, reaching the status of enormous flights during the period from June 2 to 15. Many partly grown larvae were found well distributed through the wheatfields of southeastern Nebraska during the second week in June, and the following week they were fairly common on wheat heads, especially in the lower parts of the fields in Saunders, Sarpy, and Cass Counties, but not in migration or as yet in epidemic abundance. The first complaint of serious injury to wheat heads was received from Platte County on June 18.

Kansas. H. R. Bryson (May 31): Armyworms were reported eating the wheat heads near Lone Star, Douglas County, northeastern Kansas.

Utah. G. F. Knowlton (June 8): Adults have been coming to trap lights at Cedar City, Iron County, and Spanish Fork, Utah County.

CHINCH BUG (Blissus leucopterus Say)

Indiana. C. Benton (June 20): The frequent hard rains have greatly reduced the new-brood nymphs. Although nymphs have been found since the first of June in small numbers, the bulk of those observed in the field near La Fayette, on June 13-17 were still mostly in the first to third instar, with occasionally fourth-instar nymphs. Since June 12 in some areas near La Fayette, there has been no rain, and parts of some fields of winter wheat and rye show from slight to moderately heavy infestation (up to 100 young bugs per foot of drill row).

G. E. Gould (June 25): On June 23 reports were received of a severe outbreak in southwestern Indiana, principally in the Knox County area. Infestations in all neighboring counties were reported.

Illinois. W. P. Flint (June 23): The heavy rains of May and early June have greatly reduced the threat of chinch bug damage. Barley fields are still carrying a fairly heavy infestation.

Iowa. C. J. Drake (June 25): Heavy local infestations occur throughout the two southern tiers of counties. Migration from small grain into corn has been reported from Clarke and Fremont Counties. A 40-acre field of corn in Union County was destroyed.

Missouri. L. Haseman (June 24): Despite the abundant rainfall chinch bugs are doing considerable damage on scattered farms throughout the State, but indications are that a general epidemic will not occur.

Oklahoma. C. F. Stiles (June 22): These bugs are quite numerous in scattered localities.

R. G. Dahms (June 23): Frequent heavy rains during May and the first half of June destroyed many first-generation nymphs and reduced the possibility of a serious outbreak in southwestern Oklahoma. Many bugs survived and are now doing some damage to susceptible sorghum varieties. Most of the first-generation bugs have reached the adult stage and are laying eggs.

PLANT BUGS (Miridae)

Ohio. T. H. Parks (June 10): Nymphs of an unidentified mirid have been received from three widely separated counties with specimens of injured wheat leaves.

Michigan. R. Hutson (June 22): The meadow plant bug (Miris dolabratus L.) has been reported as feeding on wheat in Adrian, Fremont, and Port Huron in scattered localities in the southern part of the State.

HESSIAN FLY (Phytophaga destructor Say).

Ohio. T. H. Parks (June 28): Reports from surveys in 13 counties are in. The infestation in these counties varies from 4.3 percent for Madison County to 11.8 percent for Pickaway County, averaging 8.0 percent. This is a slight increase over that of a year ago. No very serious losses occurred and a very small percentage of the wheat is straw broken.

Indiana. J. J. Davis (June): The hessian fly seems to be definitely on the increase and has caused much wheat to lodge and a rather large loss in yield, especially in central Indiana. In many instances wheat is being cut green for ensilage because grain is not maturing.

C. Benton (June 20): On May 28 the first brood had practically completed pupation at Delphi, Carroll County, northwest of the center of the State. The first pupa of the first supplementary brood was found, the adults emerging early in June. The heaviest egg deposition occurred near June 4, although a few eggs were found through June 16. The majority of the larvae of the supplementary brood were in the half and full-grown stages on June 16, a few small larvae and puparia being present. About 45 percent of the fly forms present in the wheat on June 20 represented the supplementary brood, which has caused very little commercial damage. The infestation in culms will add materially to the populations in many fields, and will be a potential menace to early sown wheat this fall. Reports of damage are received from various parts of the State, especially the west-central and northwestern parts. The amounts of damage reported and observed for individual fields vary from slight to occasionally severe.

Michigan. R. Hutson (June 22): Infestations ranging up to 10 percent are common in the southeast.

Missouri. L. Haseman (June 24): This pest is not causing any serious lodging of wheat.

Nebraska. M. H. Swenk (June 22): The hessian fly which, as a direct, cumulative effect of successive drought years, reached an excessively low population level in 1937, is again on the increase. Wheat fields examined in southeastern Nebraska, especially in Richardson and Pawnee Counties, in some instances showed moderate infestations late in May and early in June. Though no commercial damage occurred, infestations are sufficient to indicate that the fly may have to be taken in consideration when wheat is seeded in the fall of 1938.

Kansas. J. R. Horton (June 21): The spring period locally was characterized by moderate temperatures and frequent rains, a condition favorable to fly increase. This situation has not been sufficiently prolonged to raise the low general level of fly population surviving from 1937 to the level of outbreaks. It is difficult, if not impossible, to find a single outbreak. To show the possibilities in such a season, however, the second generation has increased in one especially favored, natural spot on spring wheat to 67 times the population of the originating first generation on winter wheat.

Kansas. R. H. Painter (June 25): The hessian fly has had a second generation wherever there are late tillers or late wheat plants. Eggs were laid under ideal conditions which resulted in almost 100-percent hatch.

SORGHUM WEBWORM (Celama sorghiella Riley)

Virginia. W. J. Schoene (June 21): Specimens received from Rockymount, Franklin County, and Chatham, in Pittsylvania County, in heads of rye. Injury has been reported from several sources. (Det. by C. Heinrich.)

WHEAT STEM MAGGOT (Meromyza americana Fitch)

Nebraska. M. H. Swenk (June 22): This maggot caused numerous whitened wheat heads in southeastern Nebraska, from Richardson County westward to Franklin County, early in June.

Kansas. R. H. Painter (June 25): The wheat stem maggot has returned to its normal abundance after being at a very low ebb last year.

WHEAT JOINTWORM (Harmolita tritici Fitch)

Missouri. L. Haseman (June 24): This pest has been extremely abundant. Unusual numbers of complaints have come from the southwestern part of the State, and at Columbia it is more abundant than usual.

CORN

CORN EAR WORM (Heliothis obsoleta F.)

New York. L. A. Carruth (June 24): On June 23 the first eggs to be found on Long Island on corn were observed in two fields between Hempstead and Valley Stream. The silks were just beginning to appear and those examined were 18 and 6 percent infested with newly laid eggs. In view of the unfavorable weather of the last month this is considered to be an early infestation, although in 1937 the first infestations were found slightly earlier. Pupae from field diggings in May are alive but have not yet emerged.

Illinois. R. A. Blanchard, A. F. Satterthwait and J. M. Wagner (June 24): Early market corn growing near East St. Louis had up to 35 percent of the ears infested on June 22, with severe damage in at least one early planting. An occasional egg was found in the vicinity of Urbana, in central Illinois, by June 16. This seems to be rather early for the insect to appear this far north. Last season the earliest record was June 27.

Kentucky. M. L. Didlake (June 23): This insect was abundant on early sweet corn at Lexington on June 23.

Missouri. R. A. Blanchard, A. F. Satterthwait, J. M. Wagner (June 24): Early planted corn in southern Missouri showed as high as 20 percent bud damage on June 8. Eggs were observed in considerable numbers near East Prairie on May 24.

Nebraska. D. B. Whelan (June 22): Half-grown larvae were found on columbine on June 2 at Lincoln.

Kansas. J. R. Horton (June 21): Moths began to emerge in the field cages at Wichita on June 3, and have continued intermittently up to June 17. This marks the first successful emergence of overwintered material in the cages. First eggs of the season were found on corn near the cages on June 16, one or more to every plant.

Oklahoma and Texas. E. V. Walter (June 20): From 100 to 500 stalks of corn were examined at intervals of about 10 miles between Dallas, Tex., and Muskogee, Okla., on June 1, and at intervals of about 5 miles between Muskogee and Joplin, Mo., on June 2. Infestations were about 50 percent at Kiowa and 2 percent at Muskogee, Okla. The farthest north that infestation could be determined was in a field near Pryor, Okla., where 3 stalks out of 300 examined showed feeding by first- or second-instar larvae. Larvae found in tops of every stalk examined near Dallas.

Utah. H. E. Dorst (June 23): A few eggs have been observed on very early sweet corn in northern Utah.

California. J. Wilcox (June 2): Upon being harvested 90 percent of the ears in a field of sweet corn at Olive, in southern California, were found to contain worms, at least 75 percent of the ears were thrown out or not picked because of damage. A field, just in tassel, had 40 percent of the tassels infested.

EUROPEAN CORN BORER (Pyrausta nubilalis Hbn.)

Vermont. H. L. Bailey (June 22): The first pupa was found in stubble in a field on June 7 at Manchester, Bennington County, in southwestern Vermont. First moth emerged from material freshly collected in that section on June 20. Larvae moderately abundant in stubble and waste stalks in Franklin County, in northwestern Vermont, on June 17, but no pupae found.

Connecticut. N. Turner (June 22): Although moths started emerging earlier than usual, the eggs were deposited later. Hatching is general and feeding is common. Indications are that the infestation in the Housatonic Valley is very heavy, but in other districts the same as or less than last year.

New York. L. A. Carruth (June 24): On western Long Island observations at intervals of 2-3 days during May and June indicate that the peak of pupation in field stubble occurred about May 15, the peak of pupation in barnyard stalks occurring about June 5 (2-generation strain). By June 15 practically all moths had emerged from stubble although emergence still continues in barnyards. Due to a backward season no eggs were found until June 4. Since that time numerous egg masses have been found, although infestations are variable in intensity. Up to June 23, the larvae found were mostly very young; on that day larvae two-thirds grown were found near Valley Stream. In the Hudson Valley observations made June 10 in Rockland, Dutchess, and Columbia Counties, and on June 13 in Albany County, disclosed egg masses in practically every field examined. The infestations were light and the eggs in most cases appeared to be newly laid. These observations confirm the presence of the 2-generation strain in the Hudson Valley. Observations in Rockland County on June 21 indicated that hatching had occurred although only small larvae were found.

New Jersey. C. A. Clark (June 20): A small number of egg masses were seen during the first week in June on early sweet corn in Burlington and Monmouth Counties. By June 13 eggs were numerous and hatching had started. (June 25): The first pupa of the first summer generation was found today. About 50 percent of the larvae are full-grown.

Ohio, Indiana, Michigan. A. M. Vance (June 3): Pupation and emergence in these States is more advanced in the spring of 1938 than in any previous year on record. The first pupa in 1938 was found west of Toledo, Ohio, on May 4, and the first evidence of moth emergence was noted in the same vicinity on May 26. The earliest previous records of pupation and emergence in this region were on May 26 and June 12, respectively, both obtained in 1936. On May 11, 1938, pupation of 1 percent had occurred in a cornfield examined in Allen County, Ind., and on June 1, 2 percent of the larvae had pupated at Mount Clemens, in southeastern Michigan. Near Toledo, in fields probably infested to a large extent by a second generation of the corn borer in 1937, pupation in 1938 averaged 6 percent on May 12, 64 percent on May 26, and 84 percent on May 31, and in all cornfields examined, the seasonal development of the insect was unusually advanced. The observed mortality in the region in the spring of 1938 averaged only 2 percent.

STALK BORER (Papaipema nebris nitela Guen.)

New York. R. W. Leiby (June 13): This borer is noticeably abundant in several counties, and is boring in stalks of recently set tomato plants.

Ohio. T. H. Parks (June 22): More than the usual number of complaints of this pest on corn (many accompanied by specimens), have been received during the last two weeks.

Indiana. G. E. Gould (June 23): During the last week damage to corn has been reported from all sections of Indiana. Damage was also reported on sweet corn and tomatoes.

Illinois. W. P. Flint (June 23): Specimens are being received from all sections of the State. The insect is partly in the early larval stages. Most of the specimens sent in are less than one-third grown.

Kentucky. M. L. Didlake (June): The common stalk borer is very abundant in the northeastern part of the State. It was injuring tobacco at Boyd, Harrison County, on June 6; corn at Georgetown, Scott County, on June 8; tomatoes, at Covington, Kenton County, on June 16; and corn at Louisa, Lawrence County, on June 20.

Michigan. R. Hutson (June 22): The common stalk borer was reported to be numerous in the vicinity of Monroe, Monroe County, and Shelby, Oceana County.

Iowa. C. J. Drake (June 25): The common stalk borer was found damaging corn in Pocahontas County, northwestern Iowa.

Nebraska. M. H. Swenk (June 22): Tomato plants in Gage and Thayer Counties were being damaged on June 12 and 18, respectively.

LESSER CORNSTALK BORER (Elasmopalpus lignosellus Zell.)

Georgia. T. L. Bissell and S. B. Fenne (June 23): This pest has been damaging peanuts at Tifton, in southern Georgia. It was first observed on about June 10. The borers kill back shoots and severely stunt the plants.

Mississippi. C. Lyle (June 24): Specimens have recently been received from Greene, Jones, and Perry Counties, in southern Mississippi, with reports that they were causing considerable damage to corn.

CORN FLEA BEETLE (Chaetocnema pulicaria Melsh.)

Indiana. P. Luginbill (June 20): Beetles were reported early in June damaging corn at Hope, southeastern Indiana.

Oklahoma. E. V. Walter (June 20): From one to four flea beetles were found on every cornstalk examined in a field near Vinita, in the northeastern part of the State.

SUGARCANE BEETLE (Eutheola rugiceps Lec.)

Kentucky. M. L. Didlake (June): The rough-headed cornstalk beetle was abundant and doing serious injury to corn in several localities in western Kentucky, and at Somerset and Pulaski, in the southeastern part of the State, throughout the month.

Tennessee. G. M. Bentley (June 4): In several parts of the State this borer is causing injury by attacking cornstalks at the ground level.

Mississippi. C. Lyle (June 24): During the last few weeks specimens, accompanied by complaints of severe damage to corn or sugarcane, were received from scattered localities over the State.

A FLOWER BEETLE (Euphoria sepulcharis F.)

Florida. J. R. Watson (June 22): This insect was sent in from Jefferson County, western Florida, where it was reported to be doing considerable damage to corn.

Mississippi. C. Lyle (June 24): Feeding in buds of corn in southern Mississippi.

SLUGS (Mollusca)

Ohio. J. S. Houser (June 10): In June 1937 significant damage to field corn was observed in northeastern Ohio. It was reported today that several square rods of a field at Smithville, north-central Ohio, had been destroyed, and less severe damage occurred in many other places. The slugs retire to the soil during the day and ascend the stalks and riddle the leaves at night.

T. H. Parks (June 15): Calls from two county agents in northwestern Ohio revealed serious injury to corn from slugs which climbed the plants to feed on the leaves. In one field 6 acres had been injured.

ALFALFA

ALFALFA WEEVIL (Hypera postica Gyll.)

Colorado. J. H. Newton (June 20): Scouting work is nearly complete, and San Miguel County added to the list of known infested counties. Very light infestation appeared in Montezuma County.

Idaho. R. W. Haegele (June 18): The alfalfa weevil has been on the increase in Canyon County, in southwestern Idaho, for several years, and this year damage to the first crop amounted to nearly 50 percent on a number of farms. Other fields showed no injury, indicating spotted infestations.

Utah. G. F. Knowlton (June 16): Injury has been noted in many Utah counties during the last 2 weeks. Many farmers are cutting hay to stop the damage.

C. J. Sorenson. (June 20): Serious damage occurred in Millard and Wayne Counties.

Oregon. R. W. Bunn (June 7): Larvae found in Douglas County. (Det. by A. G. Boving.)

THREE-CORNERED ALFALFA HOPPER (Stictocephala festina Say)

Louisiana. C. O. Eddy (June): The alfalfa girdler is abundant in alfalfa fields and is already present in the soybean fields.

CLOVER

CLOVER ROOT BORER (Hylastinus obscurus Marsham)

Pennsylvania. R. M. Baker (June 23): Several fields of clover in Lancaster County, southeastern part of the State, are very heavily infested.

VETCH

VETCH BRUCHID (Bruchus brachialis Fahraeus)

New Jersey. C. A. Clark (June 20): Adults and fresh eggs were noted in abundance at Moorestown on June 13. A few hatched eggs were seen on June 18. Pods averaged 13 eggs each by June 18.

GRASS

A SAWFLY (Pachynematus extensicornis Nort.)

Pennsylvania. R. M. Baker (June 23): There was a severe outbreak in Erie County, northwestern Pennsylvania recently. The infestation extended over approximately 6 acres and the larvae were feeding by the millions, devouring all the grass in their path and advancing at a rate of approximately 100 yards per day.

SUGARCANE

SUGARCANE BORER (Diatraea saccharalis F.)

Louisiana. B. A. Osterberger, E. R. Lett, and A. L. Dugas (June): The extremely dry weather has delayed the development of the sugarcane borer to some extent. A few very heavily infested areas occur in spotted locations. The Trichogramma parasites are very active. Collections of eggs on cane and corn have shown that 68.7 percent of the eggs collected on corn are parasitized, and collections from sugarcane show 31.2 percent parasitized, which is very high for this time of the year.

SUGARCANE ROOTSTOCK WEEVIL (Anacetrinus subnudus Buchanan)

Louisiana. B. A. Osterberger (June): During the dry weather, the number of adults collected in routine examinations of cane stubbles and grasses has decreased. Early in the spring, damage was noticeable in plant cane, especially in St. Mary Parish.

FRUIT INSECTS

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Georgia. O. I. Snapp (June 20): The infestation on peach trees at Fort Valley, in central Georgia, is less than normal. It was reported on December 20, 1937, to be the lightest of the 18 seasons that the insect has been under observation in this locality, and it has not built up an infestation equal to that of an average year.

Kentucky. M. L. Didlake (June 9): San Jose scale was reported to be abundant in one orchard at Henderson, in northwestern Kentucky, on June 9.

Tennessee. G. M. Bentley (June 9): A heavy infestation was found on plum at Madison, Davidson County, in north-central Tennessee.

EUROPEAN FRUIT LECANIUM (Lecanium corni Bouche)

New York. N. Y. State Coll. Agr. News Letter (June): This scale is fairly abundant in prune orchards in Niagara County, in western New York.

Ohio. J. S. Houser (June 13): Grape near Wooster, in central Ohio, infested. It is unusual for a coccid of this type to appear in abundance on grape under Ohio conditions. (Det. by H. Morrison.)

APPLE

CODLING MOTH (Carpocapsa pomonella L.)

New York. D. W. Hamilton (June 24): Weather conditions in the Hudson River Valley during May retarded the unusually early development of the codling moth so much that at present development appears to be normal. Peak activity, as determined by bait traps, occurred from May 31 to June 2, which is the same time at which similar activity occurred during 1936 and 1937. Larval entrances were found in the fruit as early as June 4. Entrances are hard to find in well-sprayed orchards, most of which are less than a week old. Weather conditions have been favorable for development during the last 2 weeks.

S. W. Harman (June 25): Emergence in western New York was hastened by hot weather, resulting in first-brood worms being injurious in heavily infested orchards.

- New Jersey. H. W. Allen (June): In several orchards in Burlington and Camden Counties, in southern New Jersey, injury by the first brood seems to be appreciably less than last year.
- Pennsylvania. H. E. Hodgkiss (June 16): Bait pails show large catches near buildings. Adults are emerging in large numbers from picking baskets and crates in storage sheds.
- Delaware. L. A. Stearns (June 25): Infestation by the first brood is subnormal, owing to early emergence of spring-brood moths and unfavorable weather during the egg-laying period.
- Virginia. A. M. Woodside (June 24): Spring-brood moths are still emerging in small numbers at Staunton, in northwestern Virginia, but the flight is about over. Larvae began to leave fruit on June 16. Infestation is relatively light.
- Ohio. T. H. Parks (June 22): First-brood hatching and larval entrances near Columbus, in north-central Ohio, were delayed by unfavorable weather, so that the insect is not advanced over normal seasonal development. The earliest apples are being harvested but no larvae have left the apples. First-brood entrances are not numerous.
- Indiana. L. F. Steiner (June 9): Emergence from ground cages and tree bodies at Vincennes, in southwestern Indiana, reached one of the highest peaks of the season on June 6 and again on June 8. Eggs are hatching in large numbers, but the larvae have been less successful in entering unsprayed fruit during the last week than the week before. (June 23): Adults of the first brood were emerging by June 17 and emergence is picking up rapidly in the insectary from apples injured by the early first brood. This is reflected in the bait-trap catches of June 21 and 22.
- Missouri. L. Haseman (June 24): The prolonged cool, rainy weather throughout June has delayed emergence, reduced oviposition, and interfered with larvae reaching and entering the fruits. However, there has been a rather heavy hatch in some of the commercial orchards. Moths of the overwintering generation have practically all emerged throughout the State, and the earliest first-generation larvae have been leaving the fruit since the middle of June.
- Kansas and Missouri. H. Baker (June 24): Spring-brood moths were caught in bait traps in northeastern Kansas and northwestern Missouri in large numbers from May 16 to June 6, the peak catches being taken on May 20 and 25. Larval attacks reached their peak from May 28 to June 6. The first record of the exit of a mature larva from fruit was June 7 and the first record of emergence of a first-brood moth on June 21. First-brood damage in the area as a whole appears about normal, some orchards being very clean and others wormy.

Wisconsin. C. L. Fluke (June 21): The heaviest flight in 20 years has occurred at Gays Mills, Crawford County, in southwestern Wisconsin. First heavy flight occurred on June 3, next on June 6, and the third on June 9 and 10.

Minnesota. A. G. Ruggles (June): First adult at light trap in Ramsey County, in southeastern Minnesota, reported by J. Medler on June 9.

Washington. E. R. Van Leeuwen and E. J. Newcomer (June 18): The peak of emergence of spring-brood moths in Yakima County, in south-central Washington, occurred on May 15. The largest catches of moths in baits were made May 22 to 26. The first eggs were found on trees on May 9, the maximum number occurred from May 15 to 23, and many eggs are still being deposited. Larvae began entering the fruit on May 24, were entering in large numbers from June 3 to 9, and the first larva left the fruit on June 8.

EASTERN TENT CATERPILLAR (Malacosoma americana F.)

Vermont. H. L. Bailey (June 22): First cocoons at Montpelier, in central Vermont, on May 29, and the first adult in light trap on June 20.

Massachusetts. A. L. Bourne (June 24): Tent caterpillars have concluded feeding, and have shown a marked decline from their abundance of a year ago. This is the first time for several seasons that there has been any appreciable decline in abundance.

Rhode Island. A. E. Stene (June 9): Tent caterpillars have been scarcer than during any of the last four seasons.

Tennessee. G. M. Bentley (June 9): A few reported occurring on apple trees in an orchard at Madison, Davidson County.

EYE-SPOTTED BUDMOTH (Spilonota ocellana D. & S.)

Maine. F. H. Lathrop (June 22): Transforming to adults during the past week at Monmouth, Kennebec County, in south-central Maine.

Massachusetts. A. L. Bourne (June 24): A serious outbreak was discovered in an orchard in Middlesex County, in eastern Massachusetts.

FRUIT TREE LEAF ROLLER (Cacoecia argyrospila Walk.)

New York. N. Y. State Coll. Agr. News Letter (June): This insect is causing severe injury to apples and pears in western New York.

Missouri. L. Haseman (June 24): Codling moth bait jars at Columbia, in central Missouri, took hundreds of moths each night from June 1-15. There has been a definite falling off in numbers since June 15.

ROSY APPLE APHID (Anuraphis roseus Baker)

Connecticut. P. Garman (June 20): Migrating individuals appeared about 10 days ago in New Haven and Fairfield Counties, and most of the insects have left the trees.

New York. N. Y. State Coll. Agr. News Letter (June): The rosy apple aphid is more abundant and injurious generally than usual.

Virginia. W. A. Hough (June 24): Rosy aphid causing very serious damage, 10 to 40 percent, in unsprayed orchards in the vicinity of Winchester.

Missouri. L. Haseman (June 24): The rosy aphid continued injurious throughout the fore part of June, and infested fruits and twigs show the characteristic injury.

Indiana. J. J. Davis (June 13): Rosy apple aphid caused a large amount of damage, at least in southern Indiana, during the spring. At Orleans the aphids were being noticeably checked by natural enemies by May 6.

Colorado. J. H. Newton (June 20): Infestations in orchards of Delta County, in west-central Colorado, are more severe than in many seasons.

WOOLLY APPLE APHID (Eriosoma lanigerum Hausm.)

Ohio. E. W. Mendenhall (June 25): The woolly apple aphid is noticeable on apple trees in central Ohio.

Kentucky. M. L. Didlake (June 18): Woolly aphids are abundant on crab apple at Danville, in eastern Kentucky.

Iowa. C. J. Drake (June 25): Heavy infestations were reported at Oskaloosa, Mahaska County, just east of south-central Iowa.

WHITE APPLE LEAFHOPPER (Typhlocyba pomaria McAtee)

Maine. F. H. Lathrop (June 22): A few adults were present on June 10 at Monmouth, Kennebec County, and apparently all nymphs had transformed to adults by June 21. Apparently there has been a gradual increase in numbers on apple trees in this locality during the last two summers. The insect is not yet present in destructive numbers.

Massachusetts. A. L. Bourne (June 24): Has been very abundant in orchards scattered throughout the State, although less abundant in the first brood than last year.

Connecticut. P. Garman (June 20): Nymphs later than usual in appearing in New Haven County.

New York. N. Y. State Coll. Agr. News Letter (June 20): White apple leafhopper is appearing in injurious numbers in a few orchards in Dutchess and Rockland Counties, in the lower Hudson River Valley.

Pennsylvania. H. E. Hodgkiss (June 16): First-generation adults, last-instar nymphs, and newly hatched second-generation nymphs are present.

NEW YORK WEEVIL (Ithycerus noveboracensis Forst.)

Maine. F. H. Lathrop (June 22): These large weevils were reported doing severe injury to a young orchard at Farmington, Franklin County, in western Maine. Injury was most severe next to a growth of gray birch. The weevils destroyed the bark of the spurs and the new growth, causing the terminal growth to wilt and die.

APPLE CURCULIO (Tachypterellus quadrigibbus Jay)

Missouri. L. Haseman (June 24): There has been a considerable sprinkling of apple curculios, more particularly throughout the central part of the State. Since June 20 the larvae have been pupating and an occasional adult has appeared in the breeding cages.

A WEEVIL (Phyllobius oblongus L.)

New York. N. Y. State Coll. Agr. News Letter (June 6): A heavy infestation was observed in an apple orchard south of Sodus, Wayne County, in western New York, on June 1. (June 13): A second infestation in Wayne County was noted on June 8.

APPLE FLEA WEEVIL (Orchestes pallicornis Say)

Indiana. L. F. Steiner (June 23): Serious damage is occurring in an orchard near Vincennes, where this pest has never been of any consequence.

APPLE MAGGOT (Rhagoletis pomonella Walsh)

New York. N. Y. State Coll. Agr. News Letter (June 20): Flies just beginning to emerge in the Hudson River Valley, the first fly being collected from trap cages near Poughkeepsie on June 16, and the second on June 18. In Rockland County, the first adult was found on June 13.

A LEAF-ROLLING MIDGE (Dasyneura mali Kioff.)

New York. N. Y. State Coll. Agr. News Letter (June 13): The leaf-rolling midge on apples is noted in more orchards in Monroe County, in western New York, than in former years, and some growers near the place where it was first noted 2 years ago are quite alarmed.

EUROPEAN RED MITE (Paratetranychus pilosus C. & F.)

Connecticut. P. Garman (June 21): Reports of browning have been received from several orchardists.

Pennsylvania. H. E. Hodgkiss (June 23): Very plentiful in eastern Pennsylvania, where apple foliage is beginning to bronze.

PEACH

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

Maine. F. H. Lathrop (June 22): Emergence of adults from hibernation was later and extended over a longer period than last year at Monmouth, Kennebec County. Apparently the numbers of adults in the apple trees have reached a peak. Egg scars on young apples began to appear during the first 10 days in June.

Massachusetts. A. L. Bourne (June 24): The rather cool nights, particularly late in May and early in June, somewhat retarded the activity of the plum curculio.

Connecticut. P. Garman (June 20): Appeared to do damage in New Haven County later than usual, owing to cold weather earlier in the month.

New Jersey. H. W. Allen (June): In rather extensive collections of June drop peaches, made in Burlington County, first-generation grubs appear to be unusually abundant.

Delaware. L. A. Stearns (June 22): Overwintered adults taken in unusually large numbers by jarring weekly from April 6 to date. Mature first-brood grubs were leaving dropped peaches in greatest abundance the last week in May.

Virginia. W. J. Schoene (June 24): The plum curculio is developing about 10 days earlier than usual in the vicinity of Blacksburg, in southwestern Virginia, and a second brood is feared.

A. M. Woodside (June 24): Overwintered adults are still depositing a few eggs in the insectary at Staunton. First-brood adults began to emerge on June 22.

Georgia. O. I. Snapp (June 20): The infestation at Fort Valley is still lighter than that of an average year. The early and mid-season varieties of peaches have been harvested remarkably free from damage. Adults of the first generation began to emerge from the soil in the laboratory on May 24, 11 days earlier than the first emergence last year. Jarring in commercial peach orchards revealed a marked increase in adults on peach trees on May 27 and 28. Most of these were new beetles. Second-generation egg deposition began at Fort Valley on June 15, exactly 3 weeks earlier than last year. Late peaches will therefore be subjected to a second brood. Five percent of the first-generation female curculios had started to deposit eggs by June 18.

Tennessee. W. F. Turner (June 20): From two to five plum curculios were taken per quarter tree jarred in a peach orchard in Roane County, in eastern Tennessee, on June 16. Curculios were taken from every tree.

Missouri. L. Haseman (June 24): The plum curculio has been pupating at Columbia since June 20, although up to June 24 no adults have emerged in breeding cages.

ORIENTAL FRUIT MOTH (Grapholitha molesta Busck)

Connecticut. P. Garman (June 20): Scarce in most orchards early in the month. Infested tips apparent in many places.

New Jersey. W. P. Yetter, Jr. (May 21): Spring activity in Burlington County is 10 to 14 days earlier than it was in 1937. Cool, windy, dry weather has somewhat retarded activity as well as the twig growth, which, incidentally, is shorter and harder than usual at this time of the season. Twig injury is about normal, although the damage varies considerably between orchards. Larvae are already entering the small peaches.

Delaware. L. A. Stearns (June 25): Parasitism of twig-feeding, first-brood larvae is the highest recorded during the last 10 years (between 70 and 80 percent). Injury by second-brood larvae is at its peak.

South Carolina. O. L. Cartwright (June): All peach areas in South Carolina have developed a heavier infestation this season than last. Twig injury is especially noticeable in the Johnston-Ridge Spring section.

Georgia. O. I. Snapp (June 20): Second-generation larvae are attacking green peaches in home orchards at Fort Valley. The infestation is rather heavy in those orchards where there are late varieties. The insect is not present or is of no economic importance in the commercial orchards, as there are no late varieties of peaches in these orchards.

Kentucky. M. L. Didlake (June): Was much more abundant than last year, as reported from Lexington on May 28 and in western Kentucky on June 9.

Tennessee. G. M. Bentley (June 1 and 18): Oriental fruit moth causing twig injury to peach trees generally over the State.

Louisiana. C. O. Eddy (June): Oriental fruit moth reported from Grant Parish, in west-central Louisiana. Specimens were sent.

PEACH BORER (Conopia exitiosa Say)

Connecticut. P. Garman (June 20): More abundant than for several years.

Georgia. O. I. Snapp (June 20): Peach orchards in the vicinity of Fort Valley have been examined regularly for peach borer cocoons since May 3. The first cocoon was found on May 26, which shows that pupation did not start unusually early. The first cast pupal skin was removed from a tree on May 28, 1937, and on May 9, 1936. Cocoon collections indicate a heavier pupation earlier this season than last. The infestation is about average.

Tennessee. W. F. Turner (June 20): Evidences of abundant injury noted in two orchards in Roane County on June 15 and 16.

BLACK PEACH APHID (Anuraphis persicae-niger Smith)

California. E. O. Essig (June): The black peach aphid was observed to pass the winter in the apterous stage on small twigs of peaches and plums at Berkeley. No forms were found upon the roots of a peach tree.

PEAR

PEAR PSYLLA (Psyllia pyricola Foerst.)

Connecticut. M. P. Zappe (June 23): Appears to be rather scarce, even on unsprayed pears.

New York. N. Y. State Coll. Agr. News Letter (June): The pear psylla was only moderately abundant the first 3 weeks of June. However, hot weather at the end of the month hastened development, necessitating control measures in some orchards.

PEAR LEAF BLISTER MITE (Eriophyes pyri Pgst.)

Maine. F. H. Lathrop (June): An unusual number of reports of severe infestation on pears have been received from the southern part of the State.

CHERRY

BLACK CHERRY APHID (Myzus cerasi F.)

New York. D. W. Hamilton (June 24): Black cherry aphids are more numerous on both sweet and sour cherries than they were in 1937 in the Hudson River Valley.

N. Y. State Coll. Agr. News Letter (June): The black cherry aphid is abundant in Niagara and Orleans Counties, in western New York.

Maryland. E. N. Cory (June 4): Black cherry aphid reported attacking cherry at Baltimore.

CHERRY FRUITFLIES (Rhagoletis spp.)

New York. D. W. Hamilton (June 24): First adults of R. fausta O. S. were observed in emergence cages at Poughkeepsie, in Columbia County, on May 31. Peak emergence appeared on June 4 and 5. Last fly emerged on June 14. This species is seldom noticed in sprayed orchards, but is quite noticeable in neglected plantings. The first adults of R. cingulata Loew were taken in emergence cages at Poughkeepsie on June 4. Heavy emergence began on June 13 and has continued to the present time, although the daily number of flies taken has fallen off slightly since June 22.

N. Y. State Coll. Agr. News Letter (June): Emergence of R. fausta began at Geneva on May 28.

Oregon. D. C. Mote (June): Emergence of R. cingulata began on June 1, and first eggs were found on June 17 in the Willamette Valley.

PEAR SLUG (Eriocampoides linacina Retz.)

Ohio. T. H. Parks (June): The cherry slug is much more abundant than usual in the vicinity of Columbus. No complaints have been received from commercial plantings.

Utah. G. F. Knowlton (June 24): Cherry slugs are damaging cherry foliage in Riverdale and Centerville, both in north-central Utah.

A SAWFLY (Neurotoma inconspicua Nort.)

Tennessee. G. M. Bentley (May 23): Plum sawfly found affecting cherry in Nashville, Davidson County.

CHERRY LEAF MINER (Profenusa collaris MacG.)

New York. D. W. Hamilton (June 24): Injury was quite noticeable in one of the large plantings of scours near Hudson on May 28. The infestation appeared to have spread from a few localized spots noticed the previous season. Practically all larvae had left the leaves by June 2.

PLUM

PLUM GOUGER (Anthonomus scutellaris Lec.)

Wisconsin. C. L. Fluke (June 21): Plum gouger appeared in large numbers in the University orchard, Dane County, in south-central Wisconsin, on June 1.

RASPBERRY

RASPBERRY FRUITWORM (Byturus unicolor Say)

Massachusetts. A. L. Bourne (June 24): Several instances of rather severe injury have been brought to our attention. In plantings visited the insect was more abundant than usual, and this condition seems to be true throughout the State.

Idaho. B. J. Landis and W. W. Baker (June 6): Adults were found on raspberry west of Post Falls, and at Hayden Lake, Kootenai County, in northern Idaho.

Washington. B. J. Landis and W. W. Baker (June 6): Adult beetles were found on raspberry from the eastern limits of Spokane to the Idaho State line.

Oregon. B. J. Landis, and W. W. Baker (June 4): Adults were found on raspberry at La Grande and Elgin, Union County, and at Wallowa, Wallowa County, in northeastern Oregon.

RASPBERRY SAWFLY (Monophadnoides rubi Harr.)

Michigan. R. Hutson (June 22): The raspberry sawfly is common about Lansing, Grand Rapids, Paw Paw, South Haven, Bangora, and Niles, in southern Michigan.

GRAPE

GRAPE LEAF FOLDER (Desmia funeralis Hbn.)

California. G. H. Kaloostian (June 15): In Fresno County, the grape leaf folder is increasing around the Fowler district and appears to be about the same as last year in the Parlier district, but in the Sanger district it is very much below the average year. The first brood of larvae is about two-thirds grown.

EIGHT-SPOTTED FORESTER (Alypia octomaculata F.)

Nebraska. M. H. Swenk (June 22): Caterpillars on woodbine and grapevines reported from Saunders, Platte, and Holt Counties, in eastern Nebraska, on June 17 and 20.

GRAPE PLUME MOTM (Oxyptilus periscelidactylus Fitch)

Massachusetts. A. L. Bourne (June 24): The grape plume moth has been unusually abundant and very generally distributed throughout the State.

A CANE GIRDLER (Ampeloglypter ater Lec.)

Massachusetts. A. L. Bourne (June 24): The grape cane girdler is very abundant in eastern Massachusetts, but has not been conspicuous in vineyards in the western half of the State.

GRAPE TOMATO GALL (Lasioptera vitis O. S.)

Maryland. E. N. Cory (June 22): The grape tomato gall was observed at Annapolis, Anne Arundel County, in Baltimore County, and in Charles County during June.

CURRENT

IMPORTED CURRENT WORM (Pteronidea ribesii Scop.)

Michigan. R. Hutson (June 22): Imported current sawfly is common about Shelby.

North Dakota. J. A. Munro (June 21): Imported current worm abundant in the vicinity of Fargo, in southeastern North Dakota.

CURRENT SPANWORM (Itane ribearia Fitch)

South Dakota. H. C. Severin (June): The current spanworm has occurred locally in outbreak numbers in several areas of the State, and frequently devoured current and gooseberry bushes before the owners discovered their presence.

CURRENT APHID (Capitophorus ribis L.)

South Dakota. H. C. Soverin (June): The currant aphid is exceptionally abundant and has done considerable damage to currants.

PECAN

PECAN NUT CASEBEARER (Acrobasis caryae Grote)

Oklahoma. F. A. Fenton (June 23): Pecan nut casebearer reported from Okemah, in east-central Oklahoma.

Texas. C. B. Nickels (June 21): Examinations were made to determine infestation in three orchards at Crystal City and one orchard at Eagle Pass, both in southeastern Texas, on June 1 and 2, respectively. From 50 to 95 percent of the total nut crop was destroyed by first-generation larvae.

E. W. Laake (June 20): One infestation in the vicinity of Dallas reported since June 1.

WALNUT CATERPILLAR (Datana integerrima G. & R.)

Mississippi. G. L. Bond (June 24): Injury reported as noticeable on many pecan trees along the coast.

Missouri. L. Haseman (June 24): The first moths began emerging at Columbia during the last days of May and the first days of June. Numerous males were taken at light traps for several successive days, but practically none of the female moths came to the light traps. The first hatch of worms was observed between June 15 and 20, and now the oldest caterpillars are approximately one-half inch long and apparently in the second instar, though a few may already have reached the third instar. On this date some packets of eggs are still hatching. The eggs show from 2 to 20 percent parasitism by a small, yellowish hymenopterous parasite. Common paper wasps are feeding on them, as well as nymphs of an undetermined pentatomid. An undetermined species of ichneumon was found today, vigorously parasitizing second- or third-instar larvae. From 10 to 20 colonies of worms, varying from 500 to 1,000 worms per colony, have been taken from a single walnut tree. Both hickory and black walnut trees are infested.

Oklahoma. F. A. Fenton (June 23): Walnut datana at Stillwater, in north-central Oklahoma, and at Wynnewood, in south-central Oklahoma.

C. F. Stiles (June 22): The walnut datana has made its appearance over the State, but not in as large numbers as last year. Some of the eggs are parasitized and predaceous insects feed on the larvae.

R. G. Dahms (June 23): This insect is defoliating pecan trees in many localities in southwestern Oklahoma.

Texas. C. B. Nickels (June 21): A severe infestation was observed by W. C. Pierce in one pecan orchard near Comanche, in north-central Texas, on June 20.

FALL WEBWORM (Hyphantria cunea Drury)

Georgia. O. I. Snapp (June 13): Nests of first-generation fall webworms, about half grown, are common on pecan trees at Fort Valley. They appeared a little earlier than the first generation of 1937.

Mississippi. C. Lyle (June 24): Webs reported as quite numerous in pecan trees in the vicinity of Moss Point, in southeastern Mississippi. These insects are also beginning to appear in trees in the vicinity of Starkville and State College, in the north-eastern part of the State.

PECAN BUDMOTH (Gretchena bolliana Sling.)

Texas. C. B. Nickels (June 21): A heavy infestation in a young pecan orchard reported from Blanco, in south-central Texas, on June 20.

CITRUS

GREEN CITRUS APHID (Aphis spiraeicola Patch)

Florida. H. Spencer (June 7): In the upper east coast district, rains have brought on a flush of growth on which the green citrus aphids were developing quite an infestation.

CITRUS MEALYBUG (Pseudococcus citri Risso)

Florida. H. Spencer (June 20): Complaints are coming in of infestations in the central section of Florida and on the Gulf coast. There is some interest among growers in the possibility of utilizing Cryptolaemus for control.

FLORIDA RED SCALE (Chrysomphalus nonidum L.)

Florida. H. Spencer (June 20): During May and June numbers of newly hatched scales have settled on grapefruit and orange leaves, in central Florida and on the east coast.

WHITEFLIES (Dialeurodes spp.)

Florida. H. Spencer (May 31): Many eggs of the citrus whitefly, D. citri Ashm., were being laid during the last week of May in central Florida. A few adults and eggs of the cloudy-winged whitefly, D. citrifolii (Morg.), were found on new-growth leaves on nursery plants in the same section.

J. R. Watson (June 22): The summer brood of D. citri is beginning to fly at Gainesville, in northern Florida.

TRUCK CROP INSECTS

SEED-CORN MAGGOT (Hylemyia cilicrura Rond.)

Maine. J. H. Hawkins (June 19): Reported on beans at Monmouth, in the southwestern part of the State.

Massachusetts. A. L. Bourne (June 24): We have had at least two reports of rather serious injury to plantings of lima beans. Undoubtedly this injury was somewhat aggravated by the slow germination.

Connecticut. A. W. Morrill, Jr. (June): Reported from Hartford County on tobacco, newly set in the field. The pests appeared on May 25 in heavier abundance than usual in some fields, but are not much more prevalent in the valley as a whole. Attacked plants in a few scattered shade tents on several acres in the vicinity of Hartford early in the month and late in May. Counts showed considerably less infestation in second setting where treatment was applied. After third setting the insects disappeared and did not appear again, which is the usual experience with this pest.

Indiana. J. J. Davis (June 4): Corn-seed maggot reported abundant, attacking corn-seed plantings at Goshen on June 4.

STRIPED CUCUMBER BEETLE (Diabrotica vittata F.)

Massachusetts (June 24): This pest appeared approximately on June 4 to 6, and has been very abundant.

Connecticut. N. Turner (June 22): Serious damage to untreated fields of squash and melons in all parts of the State. Emergence lasted over a long period.

Pennsylvania. H. E. Hodgkiss (June 7): The striped cucumber beetles are causing serious damage to vegetables in the eastern counties.

Ohio. N. F. Howard (June 23): Striped cucumber beetles are still numerous on squash, melons, and cucumbers at South Point and are spreading wilt.

Indiana. G. E. Gould (June 23): Damage to cucumbers and melons has been reported from many localities.

Kentucky. M. L. Didlake (June): This pest destroyed half of a cantaloup and cucumber planting at Lexington on May 28. Riddled petals of Platycodon and Philadelphus were observed at Lexington on June 20. They seemed to attack only white flowers in the garden. Melons were damaged at Lexington on June 23.

Missouri. L. Haseman (June 24): Numerous complaints during June have been received throughout the State but at Columbia considerable numbers of striped cucumber beetles began to show up in gardens about June 15.

North Dakota. J. A. Munro (June 21): Striped cucumber beetles are very abundant on cucurbits in the vicinity of Fargo.

South Dakota. H. C. Severin (June): Striped cucumber beetles are doing much damage to cucurbits and, unless controlled, make it almost impossible to raise cucumbers, melons, and squashes.

Nebraska. M. H. Swenk (June 22): Complaints of damage to cucurbit plants came from Buffalo and Redwillow Counties on June 3 and 9, respectively.

Kansas. H. R. Bryson (June 25): Striped cucumber beetles are quite abundant and cause considerable damage to young melons, squashes, and cucumbers. Reports of abundance have come from Manhattan, Belle Plain, and Burrton, all in the eastern half of the State.

Texas. R. K. Fletcher (June 17): This pest was reported as being present on cucumbers in Galveston County.

SPOTTED CUCUMBER BEETLE (Diabrotica duodecimpunctata F.)

Pennsylvania. H. E. Hodgkiss (June 7): The spotted cucumber beetles are causing serious damage to vegetables in the eastern counties.

Kentucky. M. L. Didlake (June 10): Spotted cucumber beetles are reported ruining a planting of gourds at Louisville.

Tennessee. G. M. Bentley (June 4): Spotted melon beetle found injuring watermelons, cucumbers, and squash at Waverly, Humphreys County.

Missouri. L. Haseman (June 24): During the month many complaints have been received throughout the State, but at Columbia spotted cucumber beetles did not begin to show up in considerable numbers in gardens until about June 15.

BLISTER BEETLES (Meloidae)

Georgia. S. B. Fenne (June 22): Severe injury by black blister beetles (Epicauta pennsylvanica Deg.) to potatoes in Fannin and Union Counties.

Mississippi. C. Lyle (June 24): Specimens of Macrobasis unicolor Kby. were sent in from Sardis, Panola County, on June 6 with a report that they had caused severe injury to potato plants. (June 24): E. lemniscata F. reported causing damage in gardens in Panola, Grenada, and De Soto Counties, in the northwestern part of the State.

Arkansas. D. Isely (June 22): There has been a general outbreak of blister beetles over the northern half of the State. The striped blister beetle (E. vittata F.) is the species most frequently referred to.

Nebraska. M. H. Swenk (June 22): Blister beetles were reported from Thayer County on June 20, as beginning their annual injury to potatoes. The first reports of injury to potatoes by M. segmentata Say were received from Holt County on June 16 and from Platte County on June 18, both in the eastern half of the State.

Kansas. H. R. Bryson (June 17): Blister beetles, Epicauta sp., are abundant. Rank growths of weeds have provided food for large numbers of them. Reports of injury to garden crops have been received from various parts of the State.

Oklahoma. F. A. Fenton (June 23): Blister beetle, E. vittata, reported from Earlsboro. M. torsa Lec. appeared at Perry, Harmon, and Wynnewood, in central and west-central Oklahoma.

Texas. S. B. Fenne (June 22): While driving near Houston, observed a large number of striped blister beetles (E. vittata) flying around lights.

FLEA BEETLES (Halticinae)

Nebraska. M. H. Swenk (June 22): The western cabbage flea beetle (Phyllotreta pusilla Horn) was found attacking cabbage plants in Platte County on June 2.

Colorado. R. L. Wallis (June 21): Pale-striped flea beetles (Systema taeniata Say) are damaging young cantaloups, beans, and sugar beet plants at Grand Junction, in west-central Colorado. It has been necessary to replant cantaloups in some fields.

Utah. G. F. Knowlton (June 17): The banded flea beetle (S. taeniata) is seriously damaging young pole beans at Garland, Box Elder County.

GREEN PEACH APHID (Myzus persicae Sulz.)

Pennsylvania. H. E. Hodgkiss (June 7): This pest is reported as very destructive on beets in the Philadelphia area.

California. E. O. Essig (May): The green peach aphid was found very abundant upon young tomato transplants in San Joaquin County in May but did not seriously injure the growth.

SOUTHERN GREEN STINKBUG (Nezara viridula L.)

Texas. R. K. Fletcher (June 17): This pest was reported as seriously injuring beans, peas, and tomatoes in Liberty and Cherokee Counties, in eastern Texas.

BUFFALO TREEHOPPER (Cercsa bubalus F.)

Missouri. L. Haseman (June 24): Numerous complaints have been received in June regarding nymphs attacking tomatoes, potatoes, cucumbers, flowers, and other herbaceous plants. Since June 20 some have reached the adult stage and have been found feeding and harboring on various plants, including flowers, fruit trees, and sunflowers.

A CAMEL CRICKET (Daihinia brevipes Hald.)

Nebraska. M. H. Swenk (June 22): In the area from Sheridan, Morrill, and Keith Counties east through the sandhills to Hooker County, an unusual abundance of the camel cricket has been repeatedly reported from June 15 to date. Observers familiar with this insect, have commented on its conspicuousness everywhere in the region.

POTATO AND TOMATO

COLORADO POTATO BEETLE (Leptinotarsa decemlineata Say)

Connecticut. N. Turner (June 22): Larvae are feeding on potatoes in the southern part of the State. They have not been serious for several years.

Delaware. L. A. Stearns (June 10): Injury to newly set tomato plants reported as serious throughout Sussex County.

Florida. E. W. Berger and G. B. Merrill (June 23): Reported in moderate abundance on eggplant in two small patches within the city limits of Gainesville.

Ohio. N. F. Howard (June 23): On June 23 the potato beetle was reported as normally abundant at South Point, necessitating control measures.

Michigan. R. Hutson (June 22): Colorado potato beetle is very common all over the Lower Peninsula.

Tennessee. G. M. Bentley (May 27): A slight infestation found on potatoes in Warren County.

Kansas. H. R. Bryson (June 25): Abundant but not causing much injury.

Idaho. R. W. Haegele (June 18): Infestations on potatoes are widespread and very bad in southwestern Idaho in many districts, especially in Canyon County. It has been 2 or 3 years since potato beetles have appeared here in damaging numbers.

Utah. G. F. Knowlton (June 16): A few adults were found on potato foliage at Clinton, in Davis County. This is the first observance or report this season. (June 20): Mature larvae and adults found on potato vines at Harrisville, in Weber County, recently. These beetles have been scarce on potatoes to date, in the small area infested. (June 24): Injury observed on potatoes at Marriett and West Ogden.

POTATO FLEA BEETLE (Epitrix cucumeris Harr.)

Maine. J. H. Hawkins (June 21): Reported as increasing in abundance on tomato and potato in central Maine.

Connecticut. N. Turner (June 22): Serious damage to tomato plants in several parts of the State. Unsprayed potatoes also show serious feeding.

Georgia. S. B. Fenne (June 20): Potato flea beetles in fields where control measures were not applied in Union, Fannin, Towns, Gilmer, and Rabun Counties. Leaves were literally riddled, causing stunting and deformed top.

Ohio. T. H. Parks (June 22): Injury to potatoes is severe in some early plantings in the central part of the State.

Nebraska. M. H. Swenk (June 22): Reported attacking potato and tomato plants, the first report coming on June 6 from Franklin County, where the insects were damaging tomato plants.

California. J. Wilcox (June 1): Potato flea beetle (Epitrix sp.) on tomato plants in seedbed at Tustin, Orange County, damaged about 40 percent.

CORN EAR WORM (Heliothis obsoleta F.)

South Carolina. J. G. Watts (June): Damage in commercial tomato fields at Ehrhardt and Blackville was sufficient to cause considerable concern during the first 10 days of June, but since then the damage has been decreasing.

Georgia. O. I. Snapp (June 2): The tomato fruitworm has begun to attack small green tomatoes in a commercial planting at Byron, in central Georgia.

Ohio. R. L. Nelson (June 15): At South Point a few larvae were noted in the green fruit of tomatoes. One nearly full-grown specimen was found, the remainder being second and third instar.

POTATO TUBER WORM (Gnorimoschema operculella Zell.)

California. J. Wilcox (June 8): About 20 percent of the new crop of potatoes was infested when dug at Costa Mesa, Orange County.

TOMATO PINWORM (Gnorimoschema lycopersicella Busck)

California. J. C. Elmore (June 20): The tomato pinworm is common as a leaf folder on young tomato plants in Orange, Los Angeles, and Ventura Counties, in southern California. An early field near Santa Ana, Orange County, has a 30-percent infestation of the fruit from the first pickings.

POTATO LEAFHOPPER (Empoasca fabae Harr.)

Georgia. S. B. Fenne (June 22): Infestation in the northern part of the State is not so severe as in previous years, according to growers.

Ohio. T. H. Parks (June 18): Adults and nymphs are now common on potatoes planted near a bean patch on the university farm at Columbus. This is early for nymphs to appear on potatoes.

POTATO PSYLLID (Paratrioza cockerelli Sulc.)

Nebraska. M. H. Swenk (June 22): The potato and tomato psyllid is unusually numerous in the potato fields of western Nebraska. Complaints of damage to tomato plants have been received, the first coming from Chase County on June 7.

Utah. G. F. Knowlton (June 23): A few of the insects are present generally on potatoes.

BEANS

MEXICAN BEAN BEETLE (Epilachna varivestis Muls.)

Massachusetts. C. N. Smith (June 13): This pest was found causing heavy damage to beans at Vineyard Haven, on Marthas Vineyard.

Connecticut. N. Turner (June 22): Locally very abundant. Overwintering adults have caused serious damage to beans but no larvae have been found.

New York. N. Y. State Coll. Agr. News Letter (June): The first egg masses on Long Island were found on June 6. They were observed hatching by June 20.

Delaware. L. A. Stearns (June 10): Abundance and injury about average in Sussex County.

Maryland. E. N. Cory (June 22): Continued to emerge through the State over a long period. On June 10 the beetles were still appearing in fields near Salisbury and for the first time did such severe damage to bush lima beans that some fields were plowed under.

South Carolina. J. N. Todd (June): Cage emergence of hibernating beetles at Clemson was 16.1 percent for the season. Heaviest migration from hibernation to bean fields occurred the first week in June.

J. G. Watts (June 20): Damage in home gardens in Barnwell County is increasing.

Ohio. R. H. Nelson (June 15): At South Point, first-generation adults have not yet appeared. Beans coming up during the last week or so are very lightly infested. Early beans are showing injury in certain areas, but not generally severe.

Indiana. G. E. Gould (June 23): This insect is more common than at this time last year.

Michigan. R. Hutson (June 22): Are injuring gardens in Detroit.

Tennessee. G. M. Bentley (June 1): Heavy infestations found at McMinnville, Warren County.

L. B. Scott (June 18): Present in slightly more than normal numbers in the north-central part of the State. Damage is severe in some fields.

Kentucky. M. L. Didlake (June 21 and June 23): The insects were abundant at Versailles on June 21 and at Lexington on June 23.

Mississippi. C. Lyle (June 24): Specimens accompanied by complaints of severe damage to beans have been received during the last month from numerous localities in the eastern third of the State as far south as Forrest County.

Louisiana. C. O. Eddy (June 19): Specimens, including eggs, larvae, pupae, and adults, arrived from Bogalusa, in Washington Parish, on June 20.

Arkansas. D. Isely (June 22): Has been found in Mississippi County, north-eastern Arkansas, infesting garden beans near Osceola.

Colorado. R. L. Wallis (June 21): The emergence of the beetles in hibernating cages has been approximately 25 percent to date. Beetles are appearing in numbers in the bean fields of Grand Valley, in west-central Colorado.

Utah. G. F. Knowlton (June 20): Beetle injury is reported as just beginning at Westwater, Grand County.

BEAN LEAF BEETLE (Cerotoma trifurcata Forst.)

Ohio. E. W. Mendenhall (June 25): This insect is quite abundant on beans in the vicinity of Columbus.

Virginia. A. M. Woodside (June 24): The bean leaf beetle is causing serious damage to beans in the Staunton vicinity.

Mississippi. C. Lyle (June 24): G. L. Bond reports injury to beans and peas in the vicinity of Moss Point, in Jackson County. Larvae of this species, found in the roots of cowpeas, were sent in from Ethel in Attala County, in central Mississippi, on June 22.

BANDED CUCUMBER BEETLE (Diabrotica balteata Lec.)

Florida. J. R. Watson (June 24): Reported to be severely injuring beans in Pinellas County.

Texas. J. N. Roney (June 17): Reported on corn, beans, rutabaga, tomato, and cucumbers in Galveston County.

A BEETLE (Strigoderma arboricola F.)

New York. S. W. Bromley (June 22): Two specimens recently sent in from Westchester County. No host mentioned. (Det. by E. A. Chapin.)

Virginia. L. W. Brannon (June 15): This insect was observed in large numbers at Norfolk in several snap-bean fields, feeding on the blossoms. Blossoms were being severely damaged in some parts of the fields. The insect was also feeding on smartweed blossoms on the edges of the fields.

COWPEA CURCULIO (Chalcodermus aeneus Boh.)

Georgia. T. L. Bissell (June 22): This weevil is inflicting considerable damage to snap beans left at Tifton, after the main part of the crop had been harvested. The beans do not have many eggs and larvae, but the pods are greatly disfigured by adult feeding punctures. The earliest grubs observed were found in pods on June 2.

CITRUS ROOT WEEVIL (Pachyneus opalus Oliv.)

Florida. J. R. Watson (June 22): This weevil was bred out on beans from the roots of which the larvae were collected. These beans were interplanted in a pecan orchard. However, I think this is the first instance of this insect's being able to complete its life history on a plant like bean.

A THrips (Frankliniella insularis Frankl.)

Florida. J. R. Watson (June 24): Sent in from Pinellas County, where it was reported to be doing considerable damage to beans. Though widespread in the southern half of the State, this is the first instance of any really serious damage being done by this West Indian thrips.

BEAN APHID (Aphis rumicis L.)

Nebraska. M. H. Swenk (June 22): Reported from Platte County on June 2, seriously injuring bean plants.

PEAS

PEA APHID (Illinoia pisi Kltb.)

Maine. J. H. Hawkins (June 21): More abundant on both clover and peas in Waldo County than at the same time last year. Also attacking alfalfa.

Connecticut. N. Turner (June 22): Very few aphids seen on peas as yet.

New York. New York State Coll. Agr. News Letter (June): The pea aphid has failed to develop into injurious numbers.

Nebraska. M. H. Swenk (June 22): Complaints of damage received from June 4 to 14 from Sarpy, Butler, Sherman, and Franklin Counties.

Utah. G. F. Knowlton (June 11): Seriously damaging some canning pea fields in northern Utah areas on June 11, 85 percent of one field at Murray being destroyed. In some fields populations of pea aphids have been decreasing lately. (June 23): Abundance has decreased in most canning fields in northern Utah during the last 10 days.

CABBAGE

IMPORTED CABBAGE WORM (Pieris rapae L.)

Connecticut. N. Turner (June 22): First-generation adults flying. No serious damage to unsprayed fields of cabbage and cauliflower.

Maryland. E. N. Cory (June 13): Adults flying and laying eggs in great abundance and the first larvae have hatched in Baltimore County.

Missouri. L. Haseman (June 24): During the latter half of June there seems to be an increase in cabbage worms at Columbia.

CABBAGE APHID (Brevicoryne brassicae L.)

Ohio. E. W. Mendenhall (June 25): Doing some damage to cabbage plants in Franklin County.

Nebraska. M. H. Swenk (June 22): Inquiries as to the control of this pest on radish, turnip, and related vegetables received from Franklin County on June 6 and 9.

DIAMONDBACK MOTH (Plutella maculipennis Curt.)

Utah. G. F. Knowlton (June 11): Adults abundant around trap lights at Logan, and larvae on mustards throughout northern Utah. Injury to cabbage has just begun.

HARLEQUIN BUG (Murgantia histrionica Hahn)

Ohio. N. F. Howard (June 23): At South Point the bug is not present in injurious numbers. Eggs are rather numerous on kale.

Tennessee. L. B. Scott (June 18): Pest present in more than normal numbers in north-central Tennessee. Many reports of damage to cabbage and turnips have been received, but the damage is moderate.

Mississippi (June 24): A heavy infestation on cauliflower, radish, and turnip plants observed in a garden at State College on May 25. These insects were reported as abundant on mustard and turnips from Collins, Covington County, on May 27.

SQUASH

SQUASH BUG (Anasa tristis Deg.)

Ohio. N. F. Howard (May 26): Adults were taken on young squash on the experimental plots at Columbus.

Louisiana. C. O. Eddy (June): Squash bugs have been reported from many localities during June.

Nebraska. M. H. Swenk (June 22): Squash bugs damaging pumpkin vines were the subject of complaint by a Sarpy County correspondent on June 14.

Kansas. H. R. Bryson (June 17): The squash bugs are plentiful wherever squashes or pumpkins are being grown. Reported abundant at Ottawa and Manhattan.

California. R. E. Campbell (June 1): Adults have been observed in fields of banana and Hubbard squash in the San Fernando Valley.

(June 20): At El Monte, Los Angeles County, squash bugs are attacking cream squash and table queen squash, varieties which in previous years have been immune to attack.

MELONS

MELON APHID (Aphis gossypii Glov.)

Kansas. H. R. Bryson (June 25): Reported abundant at Neosho Falls, in southeastern Kansas.

California. R. E. Campbell (June 2): This aphid was causing considerable trouble last week in the Turlock-Merced area, in central California.

PICKLEWORM (Diaphania nitidalis Stal)

Mississippi. C. Lyle (June 24): G. L. Bond of Moss Point reports pickleworm damaging cantaloups in that section of the State. They are appearing in numbers at State College.

Louisiana. C. O. Eddy (June): The pickleworm, attacking cucumbers, has been sent in from Allen Parish.

ASPARAGUS

ASPARAGUS BEETLE (Crioceris asparagi L.)

Massachusetts. A. L. Bourne (June 24): Asparagus beetles appeared slightly later than usual and were considerably less abundant than they were last year in western Massachusetts, where they were a more serious pest than they had been for many years.

New York. R. W. Leiby (May and June): In western New York the common asparagus beetle is heavily parasitized by a hymenopteron, Tetrastichus asparagi Crawf., in Monroe, Wayne, and Oswego Counties.

Idaho. R. W. Haegele (June 22): This is the first record of the occurrence of the asparagus beetle in Idaho. It was taken in gardens at Nampa, Canyon County.

Utah. G. F. Knowlton (June 4): Larvae have been abundant at Clearfield and Roy wherever control measures were not applied. The predator Perillus bioculatus F. has been observed to feed on the larvae at Riverdale.

ONIONS

ONION THRIPS (Thrips tabaci Lind.)

Connecticut. N. Turner (June 22): Locally abundant, but much less damage than on the same date last year.

California. H. J. Ryan (June 22): An unusually heavy infestation noted during the month on asparagus in the San Fernando Valley.

ONION MAGGOT (Hylemyia antiqua Meig.)

Oregon. D. C. Mote (June): Onion maggots doing considerable damage in the Labish region in northwestern Oregon. Pupae found on June 14.

HOPS

HOP APHID (Phorodon humili Schr.)

Oregon. D. C. Mote (June): Ten-percent emergence of this aphid at Corvallis, where it is infesting hop leaves.

SPINACH

SPINACH LEAF MINER (Pegomyia hyoscyami Panz.)

Connecticut. N. Turner (June 22): Two acres of spinach in Hartford County have about 25 percent of the plants infested, the first commercial damage seen on spinach for several years.

SWEETPOTATO

TORTOISE BEETLES (Metritona spp.)

Indiana. J. J. Davis (June 13): Sweetpotato tortoise beetles, M. bicolor F. and M. bivittata Say, have been reported as destructively abundant on sweetpotatoes in several localities in the northern half of the State.

Mississippi. C. Lyle (June 24): Specimens of M. bivittata received from Laurel, Jones County, on June 22, with a report that they were moderately abundant on sweetpotato plants.

SWEETPOTATO LEAF BEETLE (Typophorus viridicyaneus Crotch)

North Carolina. L. W. Brannon (June 20): First adults of the season collected in field on May 24, 17 days earlier than the first beetle was found in 1937. First eggs deposited in the insectary on June 8, and hatched on June 19.

STRAWBERRY

STRAWBERRY LEAF ROLLER (Ancyliis comptana Froel.)

Indiana. J. J. Davis (June 13): The insect has been more than usually abundant, judging from numerous reports, beginning the last of May and continuing to the present, and indicating general infestation for

central and northern Indiana.

Utah. G. F. Knowlton (June 23): Larvae and some pupae are abundant in some older fields in northern Utah, but rather scarce in others. Quite a number are parasitized.

A LEAF ROLLER (Anacampsis fragariella Busck)

Oregon. D. C. Mote (June): Pupae found at Corvallis on June 18.

STRAWBERRY FRUITWORM (Cnephasia longana Haw.)

Oregon. D. C. Mote (June): First pupa found on May 27, first adults on June 7, and first eggs on June 15, in the Willamette Valley.

STRAWBERRY WEEVIL (Anthonomus signatus Say)

Maryland. E. N. Cory (June 22): Present generally in the State. Crop severely damaged.

Delaware. H. W. Allen (June): Injury by an insect, known locally as "the clipper," presumably this species, was found to be so severe in some fields in the vicinity of Bridgeville, in southwestern Delaware, at the end of May that growers reported the harvesting of less than half the normal crop.

STRAWBERRY ROOT WEEVILS (Brachyrhinus spp.)

Utah. G. F. Knowlton (June 24): Adults of B. ovatus L. and B. rugosostriatus Goeze were abundant in a strawberry patch damaged by larvae at Willard, Box Elder County. (June 25): Ninety percent of the B. rugosostriatus were adult and 10 percent pupae in fields damaged severely at Orem and Pleasant Grove. Nearly all B. ovatus were adult also.

A LEAF BEETLE (Timarcha intricata Hald.)

Oregon. D. C. Mote (June): Larvae sent in from Marion County in northwestern Oregon, on June 4.

A CARRION BEETLE (Silpha ramosa Say)

Washington. B. J. Landis and W. W. Baker (June 3): Adult beetles were attacking strawberries in a small garden northeast of Naches, Yakima County. Said to have been extremely abundant in 1937.

EARLY STRAWBERRY SLUG (Empria fragariae Rohw.)

Nebraska. M. H. Swenk (June 22): Found attacking strawberry leaves in Holt County on May 23.

MILLIPEDES (Diplopoda)

Ohio. T. H. Parks (May 24 and June 3): Complaints were received from Hamilton County on May 24, and Lucas County on June 3, that strawberries were be-

ing fed upon by worms submitted for identification and found to be millipedes. Extensive injury was being caused by the millipedes burying the fore parts of their bodies in the ripening berries and eating holes in them. Not encountered before.

RHUBARB

RHUBARB CURCULIO (Lixus concavus Say)

Indiana. J. J. Davis (May 24): Reported doing considerable damage to commercial plantings of rhubarb at Logansport on May 24.

Tennessee. G. M. Bentley (June 3): Reported on rhubarb at Johnson City, Washington County.

A PENTATOMID (Euschistus inflatus Van D.)

Utah. G. F. Knowlton (June 2): Adults are extremely abundant around the bases of rhubarb stocks, preventing growth and resulting in seriously weakened plants at Riverdale.

TOBACCO

HORNWORMS (Protoparce spp.)

South Carolina. J. G. Watts (June): This insect, P. sexta Johan, occurred in most places on tomato, along with the tomato fruitworm, in Barnwell and Darke Counties, in the southwestern part of the State, causing control measures to be taken in some fields.

Tennessee. G. M. Bentley (June 4): Adults of P. sexta and P. quinquemaculata Haw. were commonly taken flying by night in central and eastern Tennessee.

L. B. Scott (June 18): The hornworms P. sexta and P. quinquemaculata appeared about 2 weeks earlier than usual but the infestation is below normal. It is believed that low night temperatures have delayed emergence.

TOBACCO BUDWORM (Heliothis virescens F.)

Tennessee. G. M. Bentley (June 8): Found doing severe injury to tobacco at Joelton, Davidson County. Many replantings had to be made.

Iowa. C. J. Drake (June 25): Reported from Buffalo Center, Winnebago County, and Ames, Story County, on groundcherries. This insect breeds on wild groundcherry, as well as on cultivated varieties, and is a pest of considerable importance.

A WEBWORM (Crambus sp.)

Tennessee. L. B. Scott (June 18): Crambids caused severe damage to tobacco planted on land which was idle in 1936 and 1937. In the north-central part of the State many fields required replanting of 90 percent of the original plantings. A few fields were abandoned.

POTATO FLEA BEETLE (Epitrix cucumeris Harr.)

Connecticut. A. W. Morrill, Jr. (June 6): Potato flea beetles attacked newly set tobacco, in many cases with unusual severity, from May 23 to 31, particularly in the vicinity of potato fields in Hartford County. Leaves were riddled and in some fields considerable resetting was necessary. The attack diminished after control measures had been applied. The lull between broods is now in progress and little damage has been seen since June 3.

TOBACCO THRIPS (Frankliniella fusca Hinds)

Connecticut. A. W. Morrill, Jr. (June): These insects appeared within 2 days after setting (24 hours in one case) on shade tobacco in Hartford County and seemed to be increasing rapidly during June, despite heavy rains in the first half of the month. The early appearance is unusual, and they are being found in appreciable numbers in some fields that have not had them for several years. It seems likely that this insect will be able to do some commercial damage unless the season is unusually wet, as it was last year.

A WHITEFLY (Aleyrodidae)

Florida. F. S. Chamberlin (June 14): An undetermined whitefly is causing serious injury in a crop of shade-grown tobacco in Gadsden County and has been found in lesser numbers in several other tobacco crops.

C O T T O N I N S E C T S

BOLL WEEVIL (Anthonomus grandis Boh.)

South Carolina. J. G. Watts (June): Infestation is rather general over the Blackville section, but not serious.

F. F. Bondy (June 25): In Florence County, northeastern coastal plain, in 16 untreated plots the infestation averaged about 5 percent. The damage seems to be the worst in the past several years.

Georgia. P. M. Gilmer and P. A. Glick (June 19): At Tifton, in southern Georgia, the infestation in Sea Island cotton is quite heavy and a few fields of upland cotton show a heavy infestation. First-brood weevils are beginning to emerge.

W. L. Lowry (June 25): In Lowndes and Echols Counties square examinations in both poisoned and unpoisoned fields showed little or no increase in infestation during the past 3 weeks.

Florida. C. S. Rude and L. C. Fife (June 25): The infestation is heavier than it was a year ago. Last year the average infestation in 21 fields was 8.4 percent as compared with 29 percent in the 15 fields examined this year.

Mississippi. C. Lyle (June 24): According to reports, the infestation over the State is considerably higher this year than during the last 2 years.

R. L. McGarr (June 25): At State College, in east-central Mississippi, inspections of 8,400 squares in 25 untreated plots and fields this week showed an average infestation of 21.6 percent. This was a decrease from the previous week of 7.3 percent, which was mostly due to some of the overwintered weevils dying and increase in the numbers of squares on the plants.

J. C. Clark (June 25): In Washington County (Delta section) weevils have scattered farther from hibernation quarters than in the past 2 years. Boll weevils appeared on the Experiment Station farm 13 days earlier than in 1935, 18 days earlier than in 1936, and 17 days earlier than in 1937.

Louisiana. C. O. Eddy (June): Farmers are reporting that the boll weevil is unusually abundant, and early indications are of 30- to 60-percent infestation.

R. C. Gaines (June 11): During the past week 48,000 cotton plants were examined in Madison Parish, and an average of 90 weevils per acre was found. During the same week in 1937, 49 weevils per acre, in 1936, 13 weevils per acre, and in 1935, 140 weevils per acre were found.

(June 22): Punctured squares have been found in practically all fields where records have been made. Infestation ranged from 0 to 15 percent. Weevils appear to be widely scattered. First-generation, field-reared weevils are appearing. Weather conditions have been very favorable for the rapid multiplication of weevils.

Arkansas. D. Isely (June 22): The indications of a general infestation are much greater than they have been any year since 1932. Within the last 10 days reports of boll weevil occurrence have come from scattered localities over the greater part of the cotton-producing areas in the State with the exception of the northeastern counties.

Oklahoma. C. F. Stiles (June 22): Boll weevils have been reported damaging squares as fast as they set in southeastern Oklahoma.

F. A. Fenton (June 23): Heavy spotted infestations occur.

Texas. F. L. Thomas (June 3): Total weevil emergence has been 5.98 percent, which is higher than the average in central Texas. Over half of these overwintering weevils emerged during May. Little increase was noted in the infestation in Hidalgo County during the last week. In 4 fields examined an average of 13 percent, with a maximum of 25 percent punctured squares, was found. In 21 fields examined an average of over 500 weevils per acre has been found in upland fields of presquare cotton of Brazos County and river-bottom fields of Jackson County. Few weevils were found in river-bottom fields of Burleson County and open-prairie fields of Calhoun County. (June 10): A slight decrease was noted in the population in presquare cotton in the river bottoms of Jackson County and upland fields of Brazos County. An average of 1 weevil per 200 plants has been found in fields near favorable hibernation quarters in the river bottoms of Brazos and Burleson Counties, and a maximum of 24 percent punctured squares in the oldest fields. (June 17): A slight increase was noted in the infestation in Hidalgo County last week, an average of 14 percent of the squares being found punctured in the four fields examined. In the fields of southern and central Texas, where the numbers of overwintering weevils have been found to be high, the injury, or number of punctured squares, is noticeable.

R. W. Moreland (June 25): The infestation in untreated plots this week ranged from 12 to 30 percent averaging 21 percent, as compared with 14 percent last year. A few weevils are still emerging from hibernation cages.

K. P. Ewing (June 25): In Calhoun and Jackson Counties, on the Gulf coast, the potential damage appears to be greater than last year.

PINK BOLLWORM (Pectinophora gossypiella Saund.)

Texas. A. J. Chapman (June 4): The records indicate that the survival in hibernation cages at Presidio is 7.21 percent, which is lower than for the same period last year, when it was 10.36 percent. (June 25): The number of larvae collected in blooms increased from 69 per acre on June 15 to 142 on June 23. The fields which were heavily pastured last fall continue to show the lowest infestation.

COTTON LEAF WORM (Alabama argillacea Hbn.)

Texas. F. L. Thomas (June 10): Leaf worms have been found in Hidalgo County and in all fields examined in Calhoun County. (June 17): Fullgrown leaf worms, some of which are beginning to "web up," have been observed in a number of fields in Calhoun County.

K. P. Ewing (June 11): Many fields in Calhoun County show effects of ragging although no real damage has been noted. (June 25): A new crop of leaf worms is beginning to appear in Calhoun County. Several farmers have used control measures, although there is no widespread poisoning.

R. W. Moreland (June 25): The first leaf worm was collected in the vicinity of College Station on June 18.

BEET ARMYWORM (Laphygma exigua Hbn.)

Arizona. T. P. Cassidy (June 11): Approximately 650 acres of cotton in the Marana section became heavily infested. (June 25): The infestation has practically disappeared as a result of the irrigation.

COTTON FLEA HOPPER (Psallus seriatus Reut.)

Georgia. P. M. Gilmer (June 19): At Tifton, in southern Georgia, there are only a few flea hoppers present.

Wm. L. Lowry (June 19): In Lowndes and Echols Counties very few flea hoppers have been observed on Sea Island cotton.

Mississippi. D. W. Grimes (June 24): Some injury noted in fields in central Mississippi.

R. L. McGarr (June 25): Inspection of 8,000 terminal buds in 24 untreated plots and fields of cotton this week at State College showed a very light infestation, averaging 5.7 flea hoppers per 100 buds. There has not been any noticeable increase in flea hoppers for some time.

Louisiana. C. O. Eddy (June): Cotton flea hoppers are reported from the northwestern corner of the State down the Red River Valley as far as Alexandria and Marksville on croton and bitterweed.

R. C. Gaines (June 25): Flea hoppers are very scarce on cotton at Tallulah and less abundant than during the past 2 years.

Texas. F. L. Thomas (June 3): Total emergence has been lower than average in central Texas. Hoppers increased in some fields of Burleson and Calhoun Counties during the last week. (June 10): The population increased during the last week in southern and central Texas, increasing in southern Texas from an average of 6 to 27 flea hoppers per 100 terminal buds. A large increase was noted in the adult population in a number of fields in Burleson and Milan Counties. Typical injury has been noted

in some of the oldest cotton fields. (June 17): Flea hoppers have increased considerably during the last week in Calhoun County. The average infestation in 38 fields is 75 hoppers per 100 terminal buds, which is almost a 300-percent increase over last week. In central Texas flea hoppers increased slightly in some fields, while in others, over a 200-percent increase was noted. Injury is noticeable in some fields. (June 24): The weather during the past week in southern and central Texas has been favorable for the multiplication of flea hoppers, which are doing considerable injury in southern Texas. Field inspections and flight trap records show that there has been a distinct migration of adults from native host plants to cotton during the last week. Few flea hoppers have been found on cotton in either Milam or Kaufman Counties.

R. W. Moreland (June 25): The flea hopper population is light in most upland fields.

K. P. Ewing (June 25): At Port Lavaca, in Calhoun County, the cotton flea hopper continues to do very severe and serious damage. An average of 78.5 flea hoppers per 100 terminal buds was found on 7,100 terminal buds inspected. This is in comparison to 77.4 last week.

THRIPS (Thysanoptera)

Mississippi. C. Lyle (June 6): Some late cotton in Washington County showed injury. (June 24): An infestation on young cotton plants recently reported from Scott, Bolivar County.

Louisiana. C. O. Eddy (June): Cotton thrips (Frankliniella tritici Fitch) have been abundant again during June on cotton that was planted late. This is the most abundant species.

Texas. F. L. Thomas (June 24): Thrips are reported to be doing injury to the young cotton in Dickens and Lubbock Counties, in northwestern Texas.

California. C. S. Morley (June 4): In some places in Kern County bean thrips, Heliothrips fasciatus Perg., are showing up on wild lettuce around cotton plantings in some places and the thrips are attacking the young cotton.

FOREST AND SHADE - TREE INSECTS

CANKERWORMS (Geometridae)

- Vermont. H. L. Bailey (June 22): Fall cankerworms (Alsophila pometaria Harr.) are abundant in Ferrisburg, Addison County, western Vermont, on soft maple, basswood, and other foliage. The larvae were nearly full grown on June 9. Spring cankerworms (Paleacrita vernata Peck) are abundant on elms at occasional points from Burlington, Chittenden County, western Vermont, south through Addison County. Some elms were nearly defoliated on June 21, but no larvae were present at that time and the pupae were found at the tree bases.
- Connecticut. W. E. Britton (June 24): Spotted infestations of A. pometaria on deciduous trees in Cheshire, Cornwall, Lime Rock, and Sharon were reported. A group of nine trees in Cheshire and many woodland trees in Lime Rock were completely stripped.
- Wisconsin. E. L. Chambers (June 28): Complete defoliation of many farm orchards and shade trees by cankerworms has occurred in southern Wisconsin during the last 2 weeks, where control measures have not been taken.
- C. L. Fluke (June 21): P. vernata is present on elm and apple in southeastern Wisconsin and very numerous in unsprayed orchards.
- Minnesota. A. G. Ruggles (June): Many reports of cankerworms came in from around Saint Paul and Minneapolis and also from Thief River Falls, Pennington County, in northwestern Minnesota.
- North Dakota. J. A. Munro (June 21): Severe defoliation of trees by cankerworms is reported from Minot, Ward County, in the north-central part of the State.

SPANWORMS (Geometridae)

- Connecticut. R. B. Friend (June 14): Ennomos subsignarius Hbn. reported attacking red maple, ash, elm, American hornbeam, and yellow birch at Monroe, in the southwestern part of the State. About 250 acres of woodland were defoliated in an area restricted to low land. The larvae are beginning to pupate.
- Pennsylvania. R. M. Baker (June 23): The small white geometrid, Physos-tegania pustularia Guen., is beginning to fly in numbers in wooded areas.

FOREST TENT CATERPILLAR (Malacosoma disstria Hbn.)

- Vermont. K. W. Edwards (June 10): Defoliation of maple and birch reported in woodland on Riker Mountain Range near Waterbury, in the north-

central part of the State.

K. W. Edwards and B. B. Mitchell (June 10 and 22): Defoliation of several acres of maple and birch around Duxbury and Stowe, northwestern Vermont, is reported. One hundred acres of woodland, maple and poplar, is 75 percent defoliated near Jericho, in the same general area.

E. L. Keniston (June 18): Heavy defoliation of maple, elm, and oak, mostly in maple orchards, is reported from Manchester and Dorset, southwestern Vermont.

H. N. Bean (June 23): Heavy defoliation of maple reported from southeastern Vermont at Chester, Cavendish, Springfield, and Baltimore.

Massachusetts. A. L. Bourne (June 24): The tent caterpillars have stopped feeding and throughout the State have shown a marked decline from their abundance a year ago. This is the first time for several seasons that there has been any appreciable decline in their numbers.

Connecticut. R. B. Friend (June 17): Sugar maples for a distance of about 2.5 miles along the highway near Litchfield and extending some distance back into the woodland are defoliated, many of them completely. The larvae are about full grown. P. Wallace reports that there are approximately 300 acres in Goshen and 100 acres in the northern part of Cornwall wherein the maple trees are from 50 to 95 percent defoliated. These three areas are not contiguous but are all in Litchfield County, northwestern Connecticut.

Pennsylvania. R. L. Hardy (June 4): A large area of maple, ash, and cherry is 75 percent defoliated in Oregon Township, southeastern Pennsylvania.

Michigan. R. Hutson (June 22): Reported from Harrisville and Spruce in the northern part of the Lower Peninsula.

North Dakota. J. A. Munro (June 21): Abundant and causing defoliation of shelterbelts in the vicinity of Casselton, in Cass County, southeastern North Dakota.

Washington. M. H. Hatch (May 28): Willow trees south of Renton in the west-central part of the State are being stripped by this insect.

W. W. Baker (June): Malacosoma sp. is reported as extremely abundant on fruit trees and shrubs during June, particularly in the northern part of Vashon Island, just south of Seattle.

FALL WEBWORMS (Hyphantria spp.)

Connecticut. E. P. Felt (June 21): The fall webworm (H. textor Harr.) is becoming abundant in the Stamford area, in the southwestern part of the State.

Pennsylvania. E. P. Felt (June 21): H. textor has appeared at Villanova in southeastern Pennsylvania.

H. E. Hodgkiss (June 23): H. cunca Drury is **very** abundant on shade trees in the central counties.

Tennessee. G. M. Bentley (June 18): H. cunca is reported on elm and oak trees at Memphis, Shelby County, in southeastern Tennessee.

BAGWORM (Thyridopteryx ephemeraciformis Haw.)

Pennsylvania. H. E. Hodgkiss (June 14): Small bags are being formed on arborvitae in the southeastern area.

Tennessee. G. M. Bentley (June 18): Reported as doing severe injury to evergreens in central and western Tennessee.

Mississippi. C. Lyle (June 24): There seems to be a rather heavy general infestation on arborvitae over the State.

Texas. C. B. Nickels (June 1): Exceptionally abundant on evergreen trees at Brownwood, in north-central Texas.

ORIENTAL MOTH (Cnidocampa flavescens Walk.)

Massachusetts. ~~E. P. Felt (June 21): A pupa was received from Pittsfield, Berkshire County, in western Massachusetts.~~

GREEN FRUITWORM (Graptolitha antennata Walk.)

Vermont. H. L. Bailey (June 22): Larvae were abundant on silver maple, brown ash, and willow close to Lake Champlain at Ferrisburg, in the northwestern part of the State, on June 9. Much variation in size was noted.

ASH

CARPENTER WORM (Prionoxystus robiniae Peck)

North Dakota. J. A. Munro (June 21): Reported doing serious injury to ash trees at Tyler, Richland County, and at Jud, LaMoure County, both in the southeastern part of the State.

Nebraska. M. H. Swenk. Found attacking ash and elm trees in Garden County, west-central Nebraska, on May 27, and in Holt County, northern Nebraska, on May 30.

WOOLLY BEECH APHID (Phyllaphis fagi L.)

New York. R. E. Horsey (June 2): Reported as quite severe on several varieties of the European beech at Rochester.

Maryland. E. N. Cory (June 7): Noted on purple beech at Hagerstown, in the northwestern part of the State.

BIRCH

BRONZED BIRCH BORER (Agrilus anxius Gory)

Connecticut. E. P. Felt (June 21): This pest was found abundant in white birch at Fairfield.

Indiana. J. J. Davis (June 13): Reported destroying birch at Indianapolis on May 22.

Iowa. C. J. Drake (June 25): Infestations have been reported from Davenport, in Scott County, east-central part of the State, and from Colfax, in Jasper County, central part of the State.

North Dakota. J. A. Munro (June 17): One adult beetle reared from a pupa taken from small wild cottonwood at Valley City, Barnes County, southeastern North Dakota, on May 4. (Mr. Munro had previously reported that a considerable number of those wild seedlings--being dug along the rivers for use in shelterbelt plantings--were infested with this beetle.) (Det. by W. S. Fisher.)

Nebraska. M. H. Swenk (June 22): In Douglas County, in the east-central part of the State, this insect was reported on birch.

CATALPA

CATALPA SPHINX (Ceratomia catalpae Bdv.)

Ohio. E. W. Mendenhall (June 25): Quite injurious on Catalpa bungei trees in Columbus.

ELM

ELM LEAF BEETLE (Galerucella xanthomelaena Schr.)

Vermont. H. L. Bailey (June 22): Very abundant on elm at Winooski, Chittenden County, in northwestern Vermont. Foliage on many trees badly eaten by the adults on June 2, and many beetles and eggs on foliage. No larvae present. Eggs but no larvae on foliage in Burlington on June 14.

Kentucky. M. L. Didlake (June 14 and 21): Very destructive in Jessamine County, in the east-central part of the State, on June 14 and at Lexington and Shelbyville on June 21.

California. C. S. Morley (June 4): Has completed its life cycle on elm and many trees are severely injured in Kern County.

RED ELM BARK WEEVIL (Magdalis armicollis Say)

Nebraska. M. H. Swenk (June 22): Reported damaging elm trees in Holt County on June 7 and Chinese elm trees in Perkins County on June 9.

EUROPEAN ELM SCALE (Gossyparia spuria Mod.)

Indiana. J. J. Davis (June 13): Was hatching on June 9.

Illinois. W. P. Flint (June 23): This pest has spread very rapidly during the last two or three seasons. Most of the central and northern Illinois cities and towns show some infestation. It is very general throughout many cities. Damage has been light for the last two seasons but is on the increase this year.

Wisconsin. C. L. Fluke (June 21): Reported from the southern part of the State from the following locations: Crawford, Jefferson, Calumet, and Milwaukee Counties.

Iowa. C. J. Drake (June 25): Has been reported on elms from the eastern half of the State from the following locations: Cedar Falls (Black Hawk County), Ankeny and Des Moines (Polk County), Cedar Rapids (Linn County), Ames (Story County), and Clarion (Wright County).

Utah. G. F. Knowlton (June 20): Damage has recently been reported from Salt Lake City and Logan.

WOOLLY ELM APHID (Eriosoma americanum Riley)

Michigan. R. Hutson (June 22): This pest was found on June 17 at Hulbert, in the Upper Peninsula.

South Dakota. H. C. Severin (June): Exceptionally abundant and has done considerable damage to elm.

Nebraska. M. H. Swenk (June 22): Elm trees in Lancaster, Cedar, Nance, Holt, Garfield, Custer, Sheridan, and other counties are being attacked.

DOUGLAS FIR

AN APHID (Chermes cooleyi Gill.)

New York. R. E. Horsey (June 7): A severe infestation on a number of Douglas fir in two widely separated ornamental plantings in Rochester. In addition to the typical trees, a compact form of Douglas fir was very badly disfigured, and the injury to the leaves very noticeable.

LARCH

LARCH CASE BEARER (Colcophora laricella Hbn.)

Massachusetts and Connecticut. A. F. Burgess (June 2): Field reports

indicate that this insect is very abundant in the southern section of Berkshire County, Mass., and in sections of Litchfield County, Conn. In these areas much damage has been noted this season. During recent years many larch trees have been killed.

New York. R. E. Horsey (June 3): A few were feeding on larch as late as June 3 at Rochester.

WOOLLY LARCH APHID (Chermes strobilobius Kltb.)

New York. R. E. Horsey (June 6): Numerous at Rochester on several European and Japanese larches.

LOCUST

LOCUST LEAF MINER (Chalepus dorsalis Thunb.)

Tennessee. G. M. Bentley (June 14): Completely defoliating black locust trees in the vicinity of Brunswick, in Shelby County.

Mississippi. C. Lyle (June 24): Adults sent in by F. A. Smith on May 30 with a report that they were abundant on black locust trees in Marshall and Lafayette Counties. Reported on June 21 that they were also abundant on black locust in Coahoma County. (All counties mentioned are in the northern part of the State.)

A CECIDOMYIA (Cecidomyia robiniae Hald.)

Mississippi. C. Lyle (June 24): Black locust leaves showing a moderate infestation were sent in on June 21 from Clarksdale, Coahoma County.

MAPLE

GOUTY VEIN GALL (Dasynura communis Felt)

Connecticut. W. E. Britton (June 22): Seemingly more abundant than usual on sugar maple. During the last month seven lots of specimens have been received for identification from Collinsville, Manchester, New Milford, Plainville, Simsbury, Torrington, and West Hartford.

NORWAY MAPLE APHID (Periphyllus lyropictus Koss.)

Pennsylvania. H. E. Hodgkiss (June 25): Very abundant on street and lawn trees and causing extreme annoyance on account of the honeydew.

Virginia. A. M. Woodside (June 24): The threatened outbreak at Staunton has been checked completely by predators.

WOOLLY ALDER APHID (Prociphilus tessellatus Fitch)

Maryland. E. N. Cory (June 22): Very abundant in a general infestation on maple.

AN APHID (Neoprociphilus aceris Monell)

Connecticut. W. E. Britton (June 22): Sugar maple leaves heavily infested and partly brown received from Bridgeport and New Haven.

COTTONY MAPLE SCALE (Pulvinaria vitis L.)

Ohio. T. H. Parks (June 13): This scale is quite abundant on soft maple in Champaign and Franklin Counties, in the northern half of the State.

Illinois. W. P. Flint (June 23): This scale has been sent in from many localities in northern and north-central Illinois. One specimen has come from the southern part of the State. Most infestations are very heavy.

Michigan. E. I. McDaniel (June 17): The insects have laid practically all their eggs and some of these are just beginning to hatch. It has been reported as attacking maple at Port Huron, Grand Rapids, and Jackson, in the southern part of the State.

WALNUT SCALE (Aspidiotus juglans-regiae Comst.)

Ohio. J. S. Houser (June 10): Branches heavily encrusted with insects about two-thirds grown received from Norwood in southwestern Ohio. This insect has not been common in the State within recent years.

TERRAPIN SCALE (Locanium nigrofasciatum Perg.)

Ohio. J. S. Houser (June 10): This scale is unusually prevalent on maple in many sections of Ohio and the degree of infestation is extreme. In northern Ohio the young are beginning to appear.

MAPLE BLADDER GALL (Phyllocoptes quadripes Shim.)

Connecticut. W. E. Britton (June 22): Apparently more prevalent on silver maple than usual. Specimens received from Branford, Clinton, Fairfield, New Canaan, New London, North Woodbury, and Waterbury.

Michigan. E. I. McDaniel (June 17): First samples of this gall on maple were received from Eaton Rapids, in southern Michigan.

OAK

AN APHID (Myzocallis californicus Baker)

California. E. O. Essig (May - June): This aphid was especially abundant on Quercus kelloggi in the Yosemite Valley during the latter part of May and the early part of June. The ladybird beetle (Hippodamia convergens Guen.) began its emergence and migrations early in June and apparently checked the aphid very materially by the middle of the month. This is the first record of an abundance of the oak aphid

in the Yosemite Valley, although it has been observed there by the writer since 1928.

A SCALE (Kermes pubescens Bogue)

Illinois. W. P. Flint (June 23): The oak kermes has been abundant at several points in Illinois, attacking woodland trees, as well as those in cities and towns.

Iowa. C. J. Drake (June 21): Receiving considerable number of specimens of this oak scale this spring. (Det. by H. Morrison.)

Nebraska. M. H. Swenk (June 22): A Douglas County correspondent reported on June 12 that an oak tree in his yard was being denuded of leaves.

PINE

BLACK TURPENTINE BEETLE (Dendroctonus terebrans Oliv.)

Mississippi. C. Lyle (June 24): Specimens received from Pontotoc, in northern Mississippi, on June 23 with a report that they were abundant in dying pine trees over a small area.

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana Schiff.)

Pennsylvania. H. E. Hodgkiss (May 27): Heavy infestations occur in the Philadelphia area.

Delaware. E. P. Felt (June 21): Was found injuring red pine at Wilmington.

Michigan. R. Hutson (June 22): Found in jack pine at Roseville, Macomb County, in the southeastern corner of the State.

A SHOOT MOTH (Rhyacionia rigidana Fern.)

Tennessee. G. M. Bentley (June 18): Specimens of new growth of Japanese table pine, with twig borer injury, collected at Kingsport on June 7. (Det. by C. Heinrich.)

SPRUCE BUDWORM (Cacoecia fumiferana Clem.)

Michigan. E. I. McDaniel (June 7): The spruce shoot moth was beginning to pupate on June 2. An ornamental stand of Scotch pine near East Lansing was heavily infested.

SAWFLIES (Neodiprion spp.)

New Hampshire and Massachusetts. J. V. Schaffner, Jr. (June 18): A sawfly appears to be increasing in numbers and is a serious menace to red pine in eastern Massachusetts and southern New Hampshire. In many State and municipal reservations, such as State parks, State

forests, and watersheds, and on private property many red pine plantations were sprayed to prevent serious defoliation. Heavy feeding occurred in some plantations in Essex, Middlesex, and Worcester Counties, Mass. In Massachusetts the eggs hatched during the latter part of April this year and most of the larvae completed their feeding by the second week in June.

Indiana. G. E. Gould (June 23): The pine sawfly (N. pinetum Nort.) defoliated 12 large white pines at Monticello, in White County.

Nebraska. M. H. Swenk (June 21): The fir sawfly (N. abietis Harr.) was found defoliating pine trees in a grove in Antelope County on May 26.

A SAWFLY (Neodiprion sertifer Geoff.)

New Jersey. J. V. Schaffner, Jr. (June 18): Infestations of this species in New Jersey appear to be increasing in intensity, severe defoliation having occurred this spring in both large and small plantations of red pine, and in small groups of Japanese, red, Scotch, jack, and Swiss mountain pines in Somerset. White pine and Austrian pine are fed upon rather sparingly even when growing in close proximity to heavily infested trees of other species. Hatching this year took place late in April, and feeding was completed in May before this season's growth had developed to the point where the needles separate. In severely defoliated plantations new cocoons were found on the twigs, particularly beneath the male flower catkins, as well as in the duff under the trees. Infestations are now known to occur in the northern half of the State in Hunterdon, Mercer, Middlesex, Morris, Somerset, and Union Counties.

INTRODUCED PINE SAWFLY (Diprion simile Htg.)

Michigan. E. I. McDaniel (June 28): On June 25 a large number were collected on Scotch pine in a nursery near Monroe. At present the larvae have completed their development and many of them are ready to spin up.

SPITTLEBUGS (Aphrophora spp.)

New England. J. V. Schaffner, Jr. (June 18): The spittle bug is common to abundant in many plantations of red, Scotch, and white pine from the central part of New Jersey to southern New Hampshire.

Connecticut. M. P. Zappe (June 23): A. parallela Say is very abundant in certain plantations of red and white pine.

A PITCH MIDGE (Retinodiplosis resinicola O. S.)

Michigan. E. I. McDaniel (June 10): A large quantity of jack pine twigs and branches infested with this insect have been received. Material comes from Fife Lake, and the infestation is understood to be

widespread but only trees along the edge of the plantation or trees standing in the open are infested.

PINE BARK APHID (Pinous strobi Htg.)

Connecticut. E. P. Felt (June 21): Somewhat abundant at Lakeville, in the western part of the State.

South Carolina. J. A. Berly (June 22): A light infestation reported on white pine at Greenville.

A MITE (Eriophyes pini Nal.)

California. E. O. Essig (June 27): Doing serious damage to old Monterey pine trees and even killing young trees in the San Francisco Bay district.

POPLAR

GOLDSMITH BEETLE (Cotalpa lanigera L.)

Nebraska. M. H. Swenk (June 22): Specimens from a cottonwood tree sent from Antelope County on June 18. Additional specimens were sent in from Cuming County on June 20. Both localities are in northeastern Nebraska.

POPLAR LEAF BEETLE (Phytodecta pallida L.)

Pennsylvania. H. E. Hodgkiss (June 16): Very abundant in the western part of the State.

NEVADA BUCK-MOTH (Hemileuca nevadensis Stretch)

Nebraska. M. H. Swenk (June 22): Caterpillars feeding on cottonwood were sent in from Sheridan County, in the northwestern part of the State, on May 21.

SPRUCE

A LEAF MINER (Recurvaria sp.)

Rhode Island. A. E. Stene (June 9): A leaf miner, probably R. piccaella Kearf., has been found for the first time in the State on Colorado blue spruce.

SPRUCE GALL APHID (Chermes abietis L.)

New York. R. E. Horsey (June 14): Galls conspicuous on a couple of small white spruces in an ornamental planting at Rochester.

Michigan. R. Hutson (June 22): Found on Norway spruce at Ludington, on the Lower Peninsula.

SPRUCE MITE (Paratetranychus uniunguis Jacobi)

Connecticut. W. E. Britton (June 22): Found in its usual abundance in the State. Specimens received from Dorby, Manchester, and Meriden, some of them showing twigs severely damaged.

WILLOW

MOURNING-CLOAK BUTTERFLY (Hamadryas antiopa L.)

Michigan. R. Hutson (June 22): Larvae are very common about Saginaw, Flint, and Lansing, in southern Michigan.

Iowa. H. E. Jaques (June 23): Caterpillars are again defoliating willows and Chinese elms.

Nebraska. M. H. Swenk (June 22): Larvae found defoliating branches of American elm at Lincoln on May 30. Other specimens were sent in from Washington County on June 8 and from Hamilton County on June 11.

A LEAF BEETLE (Chrysomela lapponica L.)

Ohio. T. H. Parks (June 20): These beetles and their larvae have been attacking and defoliating many willow trees in ornamental plantings throughout the State. Complaints are general and have been received since May 8.

Indiana. J. J. Davis (June 13): Larvae were defoliating ornamental willows at Decatur and Waterloo, in northern Indiana, the last of May and the first of June.

COTTONWOOD LEAF BEETLE (Chrysomela scripta F.)

Texas. F. W. Mally (June 17): Seriously injured willows in ornamental plantings in San Antonio.

Idaho. J. R. Douglass and W. E. Peay (June 28): The beetles have nearly defoliated the young twigs of several cottonwood trees at Buhl, in south-central Idaho.

POPLAR AND WILLOW BORER (Cryptorhynchus lapathi L.)

Michigan. R. Hutson (June 22): Found to be doing serious damage on ornamental plantings at Detroit.

ELM SAWFLY (Cimbex americana Leach)

Wisconsin. C. L. Fluke (June 21): Adults are very numerous in western Wisconsin in Eau Claire, Clark, Chippewa, and Monroe Counties and in the southeastern part of the State at Green Lake.

Iowa. H. E. Jaques (June 23): Adults are out in extraordinary abundance in Dickinson County, northwestern Iowa.

Kansas. H. R. Bryson (June 1): The larvae are quite common this year. The pest is reported as quite abundant at Coffeyville and some individuals have been taken at Manhattan, Humboldt, and Winfield.

INSECTS AFFECTING GREENHOUSE
AND ORNAMENTAL PLANTS

FOUR-LINED PLANT BUG (Poecilocapsus lineatus F.)

Ohio. T. H. Parks (June 15): These plant bugs have been attacking chrysanthemum leaves at Columbus and have been sent in from several localities as working on chrysanthemums and fall anemones.

OYSTERSHELL SCALE (Lepidosaphes ulmi L.)

Vermont. H. L. Bailey (June 22): Eggs began hatching at Montpelier, in central Vermont, between May 31 and June 3.

Michigan. E. I. McDaniel (June 17): Eggs are hatching and the young are establishing themselves on twigs and branches of maple and lilac at East Lansing.

Kentucky. M. L. Didlake (May 30): Abundant on apples at Hallie, in southeastern Kentucky.

AZALEA

AZALEA LEAF MINER (Gracilaria azaleella Brants)

Maryland. E. N. Cory (June 22): Found on outdoor azaleas in Baltimore.

BOXWOOD

BOXWOOD PSYLLID (Psyllia buxi L.)

Maryland. E. N. Cory (June 22): Found on boxwood in Charles County, southern Maryland.

CHRYSANTHEMUM

CHRYSANTHEMUM GALL MIDGE (Diarthronomyia hypogaea Loew)

Kentucky. M. L. Didlake (May 26): Reported as injurious at Independence, Kenton County, in north-central Kentucky.

FIRETHORN

WESTERN TUSSOCK MOTH (Hemerocampa vetusta Bdv.)

California. E. O. Essig (June): Very abundant in parts of Berkeley in June and has completely defoliated portions of hedges of Chinese hawthorn (Pyracantha cronulata).

GLADIOLUS

GLADIOLUS THRIPS (Taeniothrips simplex Morison)

North Carolina. C. S. Brimley (July 2): Worst case on gladiolus for years in my garden at Raleigh, and many other reports of thrips on gladiolus.

GOLDENROD

A DIPTEROUS GALL (Eurosta solidaginis Fitch)

Michigan. R. Hutson (June 22): Reported from Ionia, in southern Michigan.

HOLLYHOCK

A LEAF BEETLE (Calligrapha signoidea Lec.)

Washington. E. J. Newcomer (June 18): Reported as being common on garden hollyhocks at Yakima and Pullman.

IRIS

A WEEVIL (Mononychus vulpeculus F.)

Connecticut. W. E. Britton (June 22): Adults damage iris plants by eating into the buds. Specimens received from Roxbury, Thompsonville, and Woodbridge, in western Connecticut.

Michigan. E. I. McDaniel (June 7): Specimens received from Lakeview on June 6; also on wild iris from the vicinity of East Lansing, both in south-central Michigan.

JUNIPER AND CEDAR

JUNIPER SCALE (Diaspis carueli Targ.-Tozz.)

Pennsylvania. H. E. Hodgkiss (June 15): Young are hatching; at least 50 percent hatched in the southeastern part of the State.

South Carolina. J. A. Berly (June 22): Reported in a moderate infestation on juniper at Greenville, in the northwestern part of the State.

LILAC

LILAC BORER (Podosesia syringae Harr.)

New York. R. E. Horsey (June 15): A number found in lilac at Rochester on June 15. This is a troublesome pest here.

Iowa. C. J. Drake (June 25): Reported in privet hedge and lilac in Hampton, Franklin County; Ames, Story County; and Des Moines, Polk County; all in central Iowa.

RHODODENDRON

A BOSTRICHID (Polycan confertus Lec.)

California. E. O. Essig (June 27): Boring into the terminal buds and preventing new growth and flowers for the coming season at Berkeley.

RHODODENDRON LACE BUG (Stephanitis rhododendri Horv.)

Pennsylvania. H. E. Hodgkiss (June 25): Large numbers of adults and immature individuals present in the Philadelphia area.

AZALEA SCALE (Eriococcus azaleae Comst.)

Ohio. J. S. Houser (June 9): Infestation on rhododendron at Youngstown, in northeastern Ohio, of sufficient intensity to require treatment. Eggs have been deposited in abundance by some females. A few eggs have hatched.

ROSE

ROSE CURCULIO (Rhynchites bicolor F.)

Pennsylvania. H. E. Hodgkiss (June 8): Adults very abundant in rose gardens.

South Dakota. H. C. Severin (June): Especially abundant over the State and has done considerable damage to roses.

Nebraska. M. H. Swenk (June 22): An inquiry as to the control of the rose curculio from Holt County, in northern Nebraska, on May 23.

A HYMENOPTEROUS GALL (Rhodites nebulosus Bass.)

Nebraska. M. H. Swenk (June 22): Specimens of galls on rose leaves received from Gage County, in southeastern Nebraska, on May 24.

ROSE LEAF BEETLE (Nodonota puncticollis Say)

Pennsylvania. H. E. Hodgkiss (June 8): Very abundant on apple and cherry trees and on rose bushes.

Delaware. E. P. Felt (June 21): Reported as abundant on roses near Wilmington.

A ~~LEAF~~ BEETLE (Antipus laticlavus Forst.)

Florida. J. R. Watson (June 24): Sent in from Lake Wales, central Florida, where it was said to be quite injurious to roses.

A LEAFHOPPER (Oncometopia undata F.)

Florida. J. R. Watson (June 24): Doing considerable injury to roses in Alachua County, north-central Florida.

ROSE SAWFLY (Caliroa aethiops F.)

Nebraska. M. H. Swenk (June 22): Specimens of rose leaves, showing attack by the European rose slug, received from Nance County, in east-central Nebraska, on June 17.

GRASS THRIPS (Anaphothrips obscurus Mull.)

Pennsylvania. H. E. Hodgkiss (June 9): Grass thrips is seriously damaging roses.

SUNFLOWER

Missouri. A. F. Satterthwait (June 24): An experimental plot of sunflowers planted near East Prairie, in extreme southeastern Missouri, showed about 100 percent of plants infested on May 9 and probably over 25 percent with terminal buds destroyed by larvae of a moth, Eucosoma helianthana Riley. Ligyris gibbosus Deg. destroyed and is infesting about 4 percent of the plants, the adults attacking the roots. A beetle, Cylindrocopterus adpersus Lec., was numerous in the plot, as were adults of Rhodoabaenus tredecimpunctatus Ill. About 1 percent of the plants in the plot were broken off by Oecanthus nigricornis quadripunctatus Bout.

YEW

BLACK VINE WEEVIL (Brachyrhinus sulcatus F.)

New Hampshire. E. P. Felt (June 21): The insect was found injuring Taxus at Dublin, in southwestern New Hampshire.

Massachusetts. E. P. Felt (June 21): Was found on Taxus at Lincoln, in the eastern part of the State.

New York. E. P. Felt (June 21): Was found injuring Taxus at White Plains, in Westchester County.

INSECTS ATTACKING MAN AND
DOMESTIC ANIMALS

MAN

MOSQUITOES (Culicinae)

New Jersey, Delaware, and Maryland. G. H. Bradley (June 20): A period of high tides and heavy rains during the last few days of May in the coastal areas of these States caused considerable breeding of mosquitoes in the salt marshes. Adult mosquitoes, Aedes cantator (Coq.) and principally A. sollicitans (Walk.), emerged during the first week in June and invaded the coastal towns in numbers sufficient to cause annoyance.

Iowa. C. J. Drake (June 25): Very abundant and many complaints being received from all parts of the State. Heavy rains have provided an abundance of breeding places.

North Dakota. J. A. Munro (June 21): Abundant over a wide area.

Kansas. H. R. Bryson (June 25): More abundant than last year.

Utah. G. F. Knowlton (June 16): A. dorsalis Meig. is extremely abundant and annoying in the meadows west and northwest of Ephraim and at Farr West, in central Utah.

CHIGGER (Trombicula irritans Riley)

South Carolina. O. L. Cartwright (June): Causing complaints in many parts of the State.

Kentucky. M. L. Didlake (June 20): Reported as abundant in the Pewee Valley, in north-central Kentucky, on June 20.

Kansas. H. R. Bryson (June 25): Considerably more abundant than last year.

TROPICAL FOWL MITE (Liponyssus bursa Berlese)

California. D. B. Mackie (June 21): Found in Sacramento on June 17, apparently spreading from a sparrow's nest in a vine into a house and causing considerable annoyance to the owners. This is the first record for California.

CATTLE

~~SCREW~~WORM (Cochliomyia americana C. & P.)

Georgia. A. L. Brody (June 18): A case reported from $1\frac{1}{2}$ miles west of

Quitman on June 12, of an infestation in a horse. Specimens received from Quitman, Valdosta, and Lake Park, all in south-central Georgia. In the vicinity of Valdosta two specimens were found in the trap collection for the week ended June 13. (June 25): Two egg masses were deposited on artificially wounded animals at the experimental farm during the last week. A navel infestation in a calf reported from Quitman on June 19, in addition to a case in a hog during the week of June 13. One specimen was found in the status-trap catch at Quitman for the week ended June 22.

Florida. A. L. Brody (June 18): Reported from Arcadia, De Soto County, on June 11, from a herd of approximately 3,500 animals, that 395 cases had been treated since March 1, mainly in baby calves, and that screwworms are still abundant. On June 15 received larvae from Jasper, Hamilton County, removed from an infestation in a calf. Reported from Penney Farms, Clay County, that on June 2 all calves had worms. A few navel cases reported from 6 miles south of Madison, and a case in the shoulder of a dog reported on about May 1. Specimens received from Madison, Highland, and Hendry Counties, Jasper, and Penney Farms. (June 22): A specimen found in the status-trap collection at Lee, Madison County, for the week ended June 22.

Tennessee. G. M. Bentley (May 25): One infestation found near Arlington and another near Millinton, in Shelby County. (June 18): An infestation found at Covington, Tipton County, near Charleston.

HORN FLY (Haematobia irritans L.)

Georgia. A. L. Brody (June 18): The average infestation per animal at Valdosta is still from about 100 to 200.

Florida. A. L. Brody (June 18): The average number of horn flies in a herd of about 600 animals at LaBelle, Hendry County, in southern Florida, was from about 500 to 1,000 on June 6. Considerable injury was evident on many of these animals. At Brooksville, Hernando County, in west-central Florida, a bull was covered with about 5,000 horn flies but the other animals in the herd were not so heavily infested.

Missouri. L. Haseman (June 24): Horn flies have been on the increase throughout the month.

Texas. E. W. Laake (June 20): A 25-percent decrease in population has been noted during the last month at Cresson, southwest of Dallas. Previous estimated infestations of 4,000 flies per head have been reduced to approximately 3,000 flies per head. In the vicinity of Dallas the population has been reduced approximately 50 percent, showing an average infestation of 500 flies per head on 40 dairy cows.

STABLEFLY (Stomoxys calcitrans L.)

Missouri. L. Haseman (June 24): Stableflies have been on the increase throughout the month.

Nebraska. M. H. Swenk (June 22): Sufficiently annoying in Dodge County, in east-central Nebraska, to ~~elicit an inquiry as to control on~~ June 10.

Kansas. H. R. Bryson (June 27): Unusually abundant on cattle, both in pastures and around lots.

Texas. E. W. Laake (June 20): Not troublesome in the vicinity of Dallas until June 17, following a heavy rain. Present infestation on calves at laboratory, 25 per head; on cattle at 2 nearby dairies, 10 per head. Reported from Cresson as being so numerous as to make it uncomfortable to sit on the porch in the evening.

TICKS (Amblyomma spp.)

Georgia. A. L. Brody (June 18): The Gulf coast tick (A. maculatum Koch) has been increasing rapidly at Valdosta during the last week.

Florida. A. L. Brody (June 18): Specimens of the lone star tick (A. americanum L.) collected from cattle at Penney Farms on June 2.

Texas. E. W. Laake (June 20): One infestation of lone star tick reported since June 1.

SHORT-NOSED CATTLE LOUSE (Haematopinus eurysternus Nitz.)

Texas. O. G. Babcock (June): All stages of development on isolated cows, a rather heavy infestation, in northwestern Texas.

HORSE

HORSEFLIES (Tabanidae)

Missouri. L. Haseman (June 24): Since June 15 the common, medium-sized, brown horsefly has been abundant and quite annoying, particularly just about sundown. Greenhead tabanids began appearing at Columbia the last of May and the first of June, reached a peak of abundance about June 15, and are now definitely on the decline.

Texas. E. W. Laake (June 20): Horseflies frequently observed during June. Six Tabanus atratus F. and T. lineola F., or closely related species, were caught by hand on four head of cattle and around the insectary at the laboratory on June 17. Twenty-eight horseflies, probably T. lineola, were caught in 1 week in a cattle fly trap located 15 miles north of Dallas.

BOTFLIES (Gastrophilus spp.)

Iowa. C. J. Drake (June 25): A species of botfly was received from Northwood, Worth County, in north-central Iowa, and was reported as annoying to horses.

S. W. Simmons (June 18): The earliest eggs of G. nasalis (L.) were found on horses at Ames on June 13, which is later than usual. From 100 to 200 eggs are collected daily from 18 horses.

Missouri. L. Haseman (June 24): The throat bot was observed ovipositing for the first time this summer on June 24 at Columbia.

Nebraska. H. O. Schroeder (June 18): G. hacmorrhoidalis (L.) was active at Fort Robinson, Dawes County, in northwestern Nebraska, on June 4. Larvae of this species began to issue from the horses at Fort Robinson on about May 15, and were observed in greatest numbers on about May 21. G. nasalis was active on June 4. Eggs of G. intestinalis Dog. were found on horses at Page, Holt County, on June 14, a week or two earlier than oviposition has been noted in central Iowa and central Illinois.

Texas. E. W. Laake (June 20): Horse bots, probably G. intestinalis, were active near Fort Worth during the week ended June 18.

DOG

AMERICAN DOG TICK (Dermacentor variabilis Say)

Georgia. A. L. Brody (June 18): This tick has been the cause of two cases of paralysis in Valdosta. Reports of tick paralysis have been numerous from other sections of the Southeast.

Florida. A. L. Brody (June 18): Four dogs were reported from Highland County as suffering from tick paralysis and it was stated that all recovered after the ticks were removed. Another dog recovering upon the removal of the ticks was reported from the Chinsegut Hill Sanctuary Experiment Station, Hernando County.

HOUSEHOLD AND STORED-PRODUCTS INSECTS

LEAD CABLE BORER (Scobicia declivis Lec.)

California. E. O. Essig (June): Unusually abundant in parts of central and northern California this spring and has been damaging hardwood house finishings and wine tanks.

DRIED FRUIT BEETLE (Carpophilus hemipterus L.)

California. D. F. Barnes (May 31): Dried fruit beetle traps operated in the vicinity of Fresno from February 26 to May 19 indicated that the overwintering and spring population was less than half the 8-year average but about three times that of 1937.

COCKROACHES (Blattidae)

Washington. M. H. Hatch (May 28): Blatta orientalis L. taken in an apartment house at Kent, in west-central Washington. Not previously recorded from this State. Periplaneta americana (L.) was taken in a restaurant at Seattle, also not previously recorded from the State.

